The Handbook of

The Criminology of Terrorism

Edited by **Gary LaFree** and **Joshua D. Freilich**

WILEY Blackwell

The Handbook of the Criminology of Terrorism

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Part I

Introduction

Bringing Criminology into the Study of Terrorism

Gary LaFree and Joshua D. Freilich

Bringing Criminology into the Study of Terrorism

Much has changed in the relationship between terrorism research and the field of criminology in recent years. Law and justice scholars such as Kittrie (1978) and Turk (1982) made significant contributions to the research literature on terrorism and responses to terrorism in the past half-century, but much of this early work was isolated, piecemeal, and done without federal research funding. It took the Murrah Federal Building bombing in Oklahoma City in 1995 and, more importantly, the September 11, 2001, attacks in New York City, Washington, DC, and Pennsylvania before major funding to support social science research on terrorism in the United States became available. After these events, funding through the National Memorial Institute for the Prevention of Terrorism; terrorism research solicitations by the National Science Foundation, the National Institute of Justice, and the Bureau of Justice Administration; and the creation of the Department of Homeland Security's academic Centers of Excellence program all strengthened support for social scientific studies of terrorism and responses to terrorism (for a review, see LaFree & Dugan, 2016). More recently, the Minerva program, funded by the Department of Defense (DOD, 2015), and the Domestic Radicalization to Violent Extremism research program, funded by the National Institute of Justice (NIJ, 2014), have further increased levels of support.

Research on terrorism and bias crime now routinely appears in major criminology outlets; a new generation of criminologists are examining terrorism and bias crimes for class projects, dissertations, and research papers. Indeed, the American Society of Criminology (ASC) recently added a Division on Terrorism and Bias crime to the organization, and the ASC and the Academy of Criminal Justice Studies now feature several dozen papers and panels on terrorism and counterterrorism each year at their annual meetings. By the mid-2000s, Lum, Kennedy, and Sherley (2006) found more than 20,000 articles on terrorism published between 1971 and 2004. Moreover, spurred by high-profile attacks—such as the 12 coordinated shootings and bombings in Mumbai in 2008, which took the lives of

164 people and wounded several hundred more (Masood, 2009); the 2011 attacks by far-right extremist Anders Breivik, who killed eight people in Oslo and shot another 69 at a summer camp in rural Norway (Rykkja, Lægreid & Fimreite, 2011); and the 2015 attack on the offices of *Charlie Hebdo* in Paris where 12 staff members were killed by two radicalized brothers (Bilefsky & de la Baumejan, 2015)—funding of social and behavioral science research on terrorism and responses to terrorism in other parts of the world has also greatly expanded (Eder & Senn, 2008). While this volume was being finalized, high-profile attacks in Paris and Brussels seem likely to have a major impact on both policy and research in Europe and beyond (Crone, 2016).

These funding opportunities have encouraged the rapid development of a corpus of social science research on terrorism. Although the scientific rigor of this rapidly expanding literature has been uneven (LaFree & Ackerman, 2009; Silke, 2001, 2008; Turk, 2004), few dispute the contention that research on terrorism represents one of the major growth areas in social science scholarship over the past two decades, and the nexus of law and social science research has figured prominently in these developments.

The main framework and justification for this title, *The Handbook on the Criminology of Terrorism*, is to chronicle this remarkable advance toward a scientifically based social science approach to the study of terrorism in recent years, especially the contributions that have come from criminology.

The Criminology of Terrorism

Although there has been an explosive growth in research on terrorism across the social and behavioral sciences in the past two decades, until recently much of this work originated in political science or psychology. Some may find this surprising because terrorism clearly falls within the domain of criminology, which has been defined as encompassing research on "… the breaking of laws and reactions to the breaking of laws" (Sutherland & Cressey, 1978:3). As Clarke and Newman (2006:i) succinctly put it, "Terrorism is a form of crime in all essential respects." When we set out to compile this handbook, our main goal was to make it the source that researchers and policy experts would turn to for expert knowledge on criminological theories, methods, and research on understanding the human causes and consequences of terrorism. We have aimed to make this book relevant not just for scholars, but also for students, policymakers, and practitioners. It should be especially useful for the growing number of classes on terrorism and homeland security that have appeared over the past 20 years.

This handbook includes seven substantive sections and 36 chapters from leading researchers on the major themes and controversies in each of these sections. Individual chapters present specific topics or themes, and define and describe key concepts within each section. Each chapter also outlines the current state of research by reviewing the major conceptual frameworks and empirical findings in each area. Throughout the handbook, our contributors have endeavored to highlight areas of widespread agreement within the field, as well as important debates and controversies. Individual chapters also outline unresolved issues in each area of specialization and set forth important suggestions for future research. In the next part of this introduction, we provide an overview of the six major sections that comprise this handbook, and the chapters that help frame the issues in each of these sections.

Etiology

Understanding when, why, and how terrorists emerge in specific contexts is essential to building a scientific approach to the study of terrorism and, ultimately, also to devise strategies for countering terrorist threats. However, both anecdotal evidence and scientific research have demonstrated that the etiology of terrorism is complex; no single accurate profile exists of individuals or groups who have turned to terrorism, and no single model has satisfactorily explained cross-national variation in terrorist attacks. Terrorism sometimes has large-scale consequences, but, for most of the world, occurrences thankfully remain infrequent, perpetrated by few individuals from seemingly diverse sociocultural contexts. While at a *micro-level* individuals are ultimately the actors responsible for developing and executing terrorist plots, at the *meso-level* individual actions are often shaped through involvement with groups of likeminded individuals committed to a specific cause or mission. Finally, similar to individuals, at the *macro-level*, terrorist organizations are shaped by the social-structural context in which they emerge and evolve, as well as by those groups they view as allies or enemies. Macro-level variables impact the structure and actions of terrorist groups, the nuances of the ideology to which they adhere, their motivating principles, and how they express and spread their message. In many ways, these distinctions between terrorism research at the micro, meso, and macro levels resemble research in criminology that traditionally distinguishes between analysis of individuals (i.e., micro); groups or gangs (i.e., meso); and countries (i.e., macro).

The six chapters included in this section provide etiological approaches to understanding how terrorism arises at the individual, group, and country levels. We begin with a look at research on individual causes of radicalization, then move to group-level etiology, and, finally, conclude with a chapter on country-level etiological studies. We lead this section off with a review of the rapidly evolving research literature on radicalization from Randy Borum ("The Etiology of Radicalization"). Following this conceptual summary of radicalization literature, David Webber and Arie W. Kruglanski ("Psychological Factors in Radicalization: A "3 N" Approach") concentrate on three individual-level factors that, they argue, serve as psychological triggers: needs, narratives, and networks. In the next chapter, John P. Sawyer and Justin Hienz offer an empirically based investigation of a large sample of individuals who have radicalized in the United States to the point of committing criminal acts ("What Makes Them Do It? Individual-Level Predictors of Terrorism").

Following these three chapters that concentrate on individual-level determinants of radicalization, the chapter by Brent L. Smith, Paxton Roberts, and Kelly R. Damphousse ("The Terrorists' Planning Cycle: Patterns of Pre-incident Behavior") begins with individual-level data but provides an analysis based mostly on grouping these individuals into broad ideological categories (i.e., left-wing, right-wing, AQ-related). The next chapter by Katharine A. Boyd ("Group-level Predictors of Political and Religiously Motivated Violence") moves fully into the meso-level by providing a review of research on group-level predictors of terrorism including ideology, group size, alliances, group age, and financial support. Boyd explains how group-level data on terrorism are collected, and compares several relevant datasets. The final chapter in this section by Nancy A. Morris and Gary LaFree ("Country-level Predictors of Terrorism") reviews the burgeoning cross-national comparative literature on terrorism. The authors focus on economic, political, and demographic predictors of terrorism and conclude with suggestions for future research.

Theoretical Perspectives

A frequent criticism of criminological research on terrorism is that it is undertheorized (e.g., Freilich & LaFree, 2015). However, this situation has changed considerably in the past two decades. In looking over the recent criminology research literature on terrorism, we can conclude that scholars have begun to apply theoretical perspectives from criminology to help understand terrorism and responses to terrorism (Freilich & LaFree, 2015; LaFree & Dugan, 2016). While terrorism research informed by criminology theory is still maturing, there have been major advances in the past two decades.

In the five chapters in this section, we will review some of the most influential attempts to apply criminological theories to the study of terrorism. We begin with several criminological theories that have played a central role in criminology for decades. Robert Agnew provides a detailed look at one of these classic perspectives in his chapter "General Strain Theory and Terrorism." This chapter draws on Agnew's (2006, 2010) own earlier efforts to develop a theory of terrorism based on general strain theory, arguing that collective strains increase the likelihood of terrorism because they increase negative emotions, reduce social and self-controls and the ability to cope through legal and military channels, foster the social learning of terrorism, strengthen group ties, and contribute to the formation of terrorist groups. These strains increase the likelihood of terrorism by leading to negative emotional states and traits such as frustration and humiliation and reducing the effectiveness of social control through legal channels.

J. Keith Akins and L. Thomas Winfree, Jr., also review a long-standing criminological theory in their chapter "Social Learning Theory and Becoming a Terrorist: New Challenges for a General Theory." The authors provide an overview of Ron Akers' (1998) social learning theory and social learning models more generally and consider the mechanisms by which these processes operate so that individuals learn to be terrorists.

In contrast to anomie and social learning theories, situational perspectives have been relatively more common in the study of terrorism (Freilich & LaFree, 2015). In the chapter by Henda Y. Hsu and Graeme R. Newman ("The Situational Approach to Terrorism"), the authors review the relevant literature and argue that, based on the situational prevention literature in criminology, the spread of terrorist attacks is not inevitable but rather there is hope that situational counter-terrorism measures may have beneficial effects that may even diffuse to other crime situations.

While victimization theories have been common in criminology (Meier & Miethe, 1993; Lauritsen, 2010), thus far they have been rarely applied to the study of terrorism. In the chapter by William S. Parkin ("Victimization Theories and Terrorism"), the author reviews several major victimization theories and then examines the relevant literature. Parkin questions the common assumption that victims of terrorism are random and argues instead for more terrorism research that focuses on victims and their experiences.

In the final chapter from this section ("Analyzing Radicalization and Terrorism: A Situational Action Theory"), Per-Olof H. Wikström and Noémie Bouhana evaluate the utility of Wikstrom's situational action theory. The authors explain how situational action theory can be applied to radicalization and terrorism, and make the case that theoretical explanations of terrorism and radicalization must be mechanism-based and integrated at all levels of analysis.

Research Methods

As social science interest in terrorism research has grown in recent years, criminologists have brought to bear increasingly sophisticated quantitative and qualitative research

methods to better understand terrorism and its consequences (Freilich & LaFree, 2016). In the seven chapters included in this section, we highlight some of the most promising of these developments. We begin with a general chapter by Laura Dugan and Michael Distler ("Measuring Terrorism"), which concludes that, despite its limitations, open-source reporting is the most comprehensive current approach to gathering data on terrorism. The authors also point out that, because of the limitations of open source data, it is important for researchers to incorporate strategies to reduce potential biases.

In the next chapter, Mark S. Hamm and Ramon Spaaij ("Paradigmatic Case Studies and Prison Ethnography: Future Directions in Terrorism Research") argue that the traditional division between qualitative and quantitative methods is, in large part, a fiction. Using prison research as a test bed, they introduce readers to the paradigmatic case study approach. After identifying four paradigmatic cases of American lone-wolf terrorism, they apply the lessons learned from this ethnographic research to better understand the experiences of convicted terrorists imprisoned in Saudi Arabia and Israel as well as the United States.

As interest in terrorist organizations expands over time, the descriptive and explanatory potential of social network analysis (SNA) for the study of violent political groups has attracted increasing interest (Carly, Ju-Sung & Krackhardt, 2002; Krebs, 2002). In the next chapter by Aili Malm, Rebecca Nash, and Ramin Moghadam ("Social Network Analysis and Terrorism"), the authors provide an introduction to SNA and then review research that has used it to study terrorist networks. The authors argue that the often decentralized, covert nature of terrorist networks makes the application of SNA especially relevant.

For decades, leading criminologists have pointed out that crime clusters in space, time and space–time, and various theories have been proposed to explain these patterns (Brantingham & Brantigham, 1981; Cohen & Felson, 1979). In more recent years, criminologists (e.g., Weisburd, Groff & Yang, 2012; Groff & Lockwood, 2014) have developed innovative new research methods for analyzing spatial and temporal patterns of crime. In the chapter by Shane D. Johnson and Alex Braithwaite ("Spatial and Temporal Analysis of Terrorism and Insurgency"), the authors argue that many of the spatial and temporal analysis methods from criminology and other social sciences are also appropriate for the analysis of terrorism. They summarize and evaluate the growing research literature on spatial and temporal patterns in the incidence of terrorist and insurgent violence. Their approach is multi-disciplinary, drawing on criminology but also on political science, international relations, and terrorism studies.

We round out this section with three methodological chapters that take quantitative innovations that have been important for advancing criminology research in recent years and consider their applicability for research on terrorism. Brian D. Johnson ("The Promise of Multilevel Analysis in the Study of Terrorism") explores the utility of multilevel analysis; Nancy A. Morris ("Methodological Advances in the Study of Terrorism: Using Latent Class Growth Analysis to Estimate Terrorism Trends") reviews latent class growth analysis (LCGA); and Robert Apel and Henda Y. Hsu, ("Interrupted Time Series Analysis in the Study of Terrorism") examine recent developments in time series analysis.

Johnson argues that, while terrorism frequently involves multiple units of analysis—from individual suspects to terrorist organizations, and from countries of origin to temporal variations—multilevel models of terrorism have thus far been rare (for an exception, see Katharine A. Boyd in this volume). Johnson provides an overview of hierarchical linear models and provides directions for future research. Similar to multilevel analysis, LCGA is being used increasingly to study crime, and Morris argues that it also has great utility for the study of terrorism. She reviews the handful of studies that have used LCGA to estimate terrorism trends and offers suggestions for future research.

Finally, Hsu and Apel summarize standard approaches to interrupted time series analysis in both univariate and multivariate settings and then provide an introduction to autoregressive integrated moving averages (ARIMA) and vector autoregression (VAR). The authors then demonstrate the utility of interrupted time series analysis for the study of terrorism by assessing the impact of US embassy fortifications on subsequent terrorist embassy attacks. They conclude that enhancing embassy fortifications reduced attacks on US diplomatic targets without increasing the risk of attacks elsewhere.

Types of Terrorism

Many commentators have noted the difficulty in conceptualizing and measuring terrorism (Crenshaw, 1981; Schmid & Jongman, 1988; Hoffman, 2008), and it is incontrovertible that the term covers a diverse array of ideological motivations and tactics. To capture some of this diversity in this section, we include five chapters that explore different types of terrorism. The first two chapters each examine one of the two major types of ideologies that are most frequently associated with terrorist attacks: right-wing and left-wing. The next three chapters examine three types of terrorism that have each evoked a good deal of concern in recent years: aerial hijackings, suicide bombings, and assassinations.

In the chapter by Peter Simi and Bryan F. Bubolz ("Far Right Terrorism in the United States"), the authors point out that far-right terrorism has a long history in the United States, and that it stems from a broad constellation of networks, organizations, and individuals. The authors discuss trends in US right-wing terror attacks, focusing especially on the type of violence and the different sectors that constitute the far right. In the chapter by Jennifer Varriale Carson ("Left-wing Terrorism: From Anarchists to the Radical Environmental Movement and Back"), the author provides an overview of left-wing terrorism in the United States, starting with the anti-imperialist groups of the 1960s, and moving on to the radical environmental and animal rights groups that became influential during the late 1970s.

Aerial hijacking has long been a terrorist tactic that generates a great deal of public fear and concern. Susan Fahey ("Assessing Aerial Hijacking as a Terrorist Tactic") reviews the history of aerial hijacking and the use of rational choice and routine activities theories to explain hijackings. She then provides descriptive statistics from the Global Terrorism Database (GTD) (LaFree, Dugan & Miller, 2015) on the ways in which hijackings have been carried out over time. As with hijackings, suicide bombings have generated a good deal of public attention. Ami Pedahzur and Susanne Martin ("Evolution of Suicide Attacks") examine research on suicide attacks, drawing particular attention to the main conceptual, methodological, and theoretical issues and debates on the subject. The authors also highlight gaps in the literature and identify important research questions that remain unanswered. Finally, media attention is usually quite strong for terrorist assassinations. In the chapter by Marissa Mandala ("Terrorist Assassinations: A Criminological Perspective"), the author provides a brief history of assassination as a terrorist tactic and discusses how criminological theories can help explain assassinations. As with Fahey, she then uses GTD to highlight distinct characteristics of assassinations.

Terrorism and Other Types of Crime

While researchers who have developed terrorism event databases go to great lengths to distinguish terrorism from other forms of crime, the distinctions are often complex

(LaFree, Dugan & Miller, 2015). Some organizations rely on street crimes, drug sales, and organized crime to support their activities (Metelits, 2010; Arias & Hussain, Chapter 24, this volume). As we will see from the authors included in this section, in other cases, terrorist organizations seek already established distribution networks connected to narcotics or piracy to further their causes. Many organizations change their mix of terrorist and non-terrorist criminal behavior over time (Stepanova, 2008; Flanigan, 2009). Oftentimes, both the legal and conceptual distinctions between terrorism and other types of crime are blurred (Freilich & LaFree, 2016). The five chapters in this section all explore connections between terrorism and more common types of crime.

We lead this section off with a chapter by Enrique Desmond Arias and Nazia Hussain ("Organized Crime and Terrorism"), which focuses on differences between organized crime and terrorism but also makes the more general point that research and policy on terrorism can benefit by placing the study of terrorism and other crime types in a broader social context. The authors argue against drawing inflexible lines between terrorism and other crimes, and encourage researchers to look for connections across organizations that become involved in both criminal and terrorist activities and connections between those that use terrorism and those that oppose government policies but do not engage in terrorist methods.

Hate crime is probably the type of criminal behavior most frequently linked to terrorism by researchers (Hamm, 1993; Krueger, 2007). In the chapter by Ryan D. King, Laura M. DeMarco, and Robert J. VandenBerg ("Similar from a Distance: A Comparison of Terrorism and Hate Crime"), the authors assess the similarities and differences between hate crime and terrorism. They conclude that the two are correlated, such that hate crime often follows certain types of terrorist attacks, but nonetheless the two are best treated as separate phenomena.

The remaining three chapters in this section deal with very different types of illegal behavior that nonetheless are often interpreted as terrorist behavior. In the chapter by Jeff Gruenewald and Brent R. Klein ("Studying Extremist Homicide in the United States"), the authors consider several conceptual and methodological problems in studying politically motivated extremist homicides and outline how criminologists can overcome these obstacles by relying on open-source databases. The chapter focuses on homicides perpetrated by members and affiliates of the extreme far right and al-Qaeda and associated movements (AQAM). The chapter by Brandon A. Sullivan, Joshua D. Freilich, and Steven M. Chermak ("Financing Terror: Financial Schemes Involving Far Right and Jihadi Extremists") uses data from the Extremist Crime Database (ECDB) (Freilich et al., 2014) to examine financial crimes, which is another area where there is considerable overlap between terrorism and ordinary crime. The authors find that both far-right extremist activity and supporters of AQAM frequently engage in financial crimes including tax avoidance, false liens, and check fraud.

Finally, the chapter by Bo Jiang ("An Empirical Analysis of Maritime Terrorism Using the Global Terrorism Database") compares terrorism to maritime piracy, another area of considerable overlap. In a descriptive analysis based on the Global Terrorism Database, Jiang finds that maritime terrorist attacks are highly concentrated across specific terrorist organizations and countries.

Countering Terrorism

In recent years, researchers have begun to examine the success of a wide variety of efforts aimed at countering terrorism (Dahl, 2014; Hasisi, Jonathan-Zamir & Weisburd, 2014; Phillips, 2015). These analyses have been conducted on the incident level (comparing successful with

unsuccessful/foiled plots), organizational level (comparing violent with non-violent groups), and micro-level (comparing violent with non-violent extremists, terrorists to routine offenders, and terrorists to other terrorists). Both repressive government countermeasures undertaken to combat terrorism directly and conciliatory initiatives that bolster community-level resilience have been examined for efficacy and possible backlash (D'Alessio, Stolzenberg & Dariano, 2014; LaFree, Dugan & Korte, 2009; Dugan & Chenoweth, 2012). By comparing failed, foiled, and successfully executed terrorist attacks, researchers have begun to identify components of counterterrorism efforts that have been successful as well as opportunities for prevention or mitigation (Dahl, 2011; Freilich et al., 2014).

Once apprehended, in the vast majority of cases, individuals charged with terrorism are processed by the same criminal justice system that handles more ordinary types of crime. As the chapters included in this section reveal, a wide variety of important policy issues relate to the criminal justice processing of those suspected and convicted of terrorism. These concerns begin with prevention and run through the entire criminal justice system—starting with police, moving through prosecution and courts, and, for those convicted, ending in prisons. Once in prison, there is also a good deal of policy interest regarding the treatment of the incarcerated and their risk to society if and when they are released.

We lead this section off with two chapters aimed at preventing terrorism before it happens. The chapter by Stevan Weine and William Braniff ("Empowering Communities to Prevent Violent Extremism: A Report on the August 2014 National Summit)" describes 14 recommendations for law enforcement, other government, and community-based organizations to improve their countering violent extremism (CVE) efforts. Each recommendation is contextualized with examples and associated challenges as articulated by a group of experts that attended a national summit on CVE. In the chapter by Kevin J. Strom, John S. Hollywood, and Mark W. Pope ("Terrorist Plots against the United States: What We have Really Faced, and How We might Best Defend against It"), the authors describe the results of an analysis of 150 completed and foiled terrorist plots against the United States from 1995 to 2012. They find that the United States has been more successful at thwarting terrorist plots in the years since 9/11 as compared with 6 years prior.

The next four chapters in this section all deal with criminal justice responses to terrorism. In the chapter by Simon Perry, David Weisburd, and Badi Hasisi ("The 10 Commandments for Effective Counterterrorism"), the authors provide what they consider to be the 10 most effective and proven counterterrorism strategies, tactics, and practices, and point out that these mostly situational crime prevention techniques are similar to those that law enforcement routinely uses against more ordinary offenders. The authors conclude that the best prevention strategies rely on reducing the opportunities for terrorist attacks, developing strong partnerships between the police and the public, and quickly restoring attack scenes when prevention measures fail.

The role of the prosecution in the criminal justice processing of terrorist cases is taken up by Christopher A. Shields, Brent L. Smith, and Kelly R. Damphousse ("Prosecuting Terrorism post-9/11: Impact of Policy Changes on Case Outcomes"). The authors point out that policy changes in the wake of 9/11 have centered on a more proactive approach to intercepting, arresting, and prosecuting terrorism-related crimes. Important changes such as the USA PATRIOT Act, the expansion of the Antiterrorism and Effective Death Penalty Act, and operational changes to the Attorney General's Guidelines on terrorism and domestic security investigations have resulted in higher conviction rates as well as a heavier emphasis by prosecutors on immigration violations, financing crimes, and material support cases.

The chapter by Margaret A. Zahn ("Prisons: Their Role in Creating and Containing Terrorists") tracks the legal processing of convicted terrorists into the prison system. The author reviews both literature on how prison structures may encourage terrorist behavior and also the various programs experienced by terrorists in prisons. She finds that prison overcrowding and gangs may be associated with radicalization, and that, while many prisoners convert to different religions in prison, few go on to commit terrorist acts upon their release.

Once individuals have been brought into the criminal justice system and especially after they have been incarcerated, society has a compelling interest in estimating what future risk they pose. In the chapter by John Monahan ("The Individual Risk Assessment of Terrorism: Recent Developments"), the author presents evidence on the individual risk of terrorism, focusing critical attention on recent developments in the identification of valid risk factors. Monahan argues that the most promising candidates for such risk factors include ideologies, affiliations, grievances, moral emotions, and identities. He also finds that the risk factors for lone-actor terrorism may diverge significantly from those for group-based terrorism.

The final two chapters in this section examine efforts to prevent terrorism in two areas that, in recent years, have attracted increasing public concern: eco-terrorism and cyber terrorism. In the chapter by Sue-Ming Yang and Yi-Yuan Su ("Legislative Efforts to Intervene and Prevent Eco-Terrorist Attacks"), the authors review the history of radical environmental groups and animal rights extremists. They find that, while these groups have caused substantial economic loss to US businesses, they rarely injure humans. The authors conclude that strict regulations could successfully deter much extremist behavior by environmental and animal rights groups, and that, from a policy standpoint, it would be advisable to treat these offenders as ordinary criminals rather than as terrorists.

If Yang and Su argue that it might be strategic to stop treating radical environmentalists and animal rights offenders as terrorists, David Maimon and Alexander Testa, in the final chapter of the last section of the book ("On the Relevance of Cyber Criminological Research in the Design of Policies and Sophisticated Security Solutions against Cyber-Terrorism Events"), point out that, despite the incredible public interest in so-called "cyber terrorism," there has not been a single recorded case to this point in time.[1] The theoretical nature of cyber terrorism threats challenges experts' ability to identify effective security solutions against cyber terrorist activity. The authors reason that, because cyber terrorism may be seen as a special case of computer-focused crime, it is reasonable to think that it could be influenced by some of the same security practices and policies that are designed to protect organizations from cyber attacks in general. To develop these security solutions (i.e., both policies and technical tools), the authors propose that cyber security professionals draw on criminological theories and research designs and employ an evidence-based approach to cyber security.

Toward a Criminology of Terrorism

We hope that this handbook will convince readers that, during the past two decades, criminologists have made substantial strides toward developing a science-based approach to understanding terrorism and its consequences. During this period, the research agenda on terrorism has begun to, more closely than before, resemble criminological research on other types of illegal behavior such as organized or white-collar crime. As we can see in the

chapters included, terrorism research is now frequently influenced by criminological perspectives on etiology. Research on terrorism informed by major criminological theories is increasing. Moreover, terrorism researchers have borrowed heavily on research methods commonly used in criminology. Criminologists and others have also examined, with increasing frequency, the different sub-types of terrorist behavior and the areas where terrorism overlaps with other crimes. We have also seen a growing connection between the traditional criminological emphasis on understanding legal processing in general with an urgent contemporary desire to prevent or mitigate terrorist attacks. Both of these developments are also related to the need to deal as effectively as possible with the criminal justice processing of those charged and convicted for terrorism-related offenses.

As the study of terrorism continues to develop, it is likely that connections between terrorism research and more traditional criminological approaches will widen and deepen. Moreover, while terrorism research has often drawn, during the past quarter-century, on fields such as criminology to provide useful theories and methods, this transmission is likely to move increasingly in both directions as terrorism research matures. For example, it is already the case that research innovations in the study of terrorism are beginning to enrich criminology research. Thus, research on terrorism has evident implications for a whole host of traditional criminology issues—including differences between lone and group offenders, connections between gangs and terrorist organizations, developing risk estimates for those convicted of terrorism versus those convicted of more common crimes, and the effectiveness of community and criminal justice-based efforts to counter ordinary crime and violent extremism.

Criminology has always been a multidisciplinary field that draws on theories and methods from other disciplines to better understand crime. This makes it a natural partner for contributing to an improved understanding of terrorism. While we are still near the beginning of research and policy connections between mainstream criminology and terrorism studies, it seems likely that criminologists' interest in understanding terrorist violence will only increase. We hope that, in a small way, this handbook will contribute to a deeper connection between criminology and terrorism research and education in the future.

Note

1 Known cases thus far have generally been associated with countries rather than terrorist organizations.

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Part II
Etiology

1

The Etiology of Radicalization

Randy Borum

Terrorism is typically distinguished from other forms of violence by its motivational component; its motivations ostensibly are to advance political, ideological, or religious objectives. A willingness to use violence (particularly against civilians) in service of those objectives is regarded as a reflection of extremism. The process by which extremism—in ideas or behavior—develops is commonly referred to as "radicalization."

What is Radicalization?

Social scientists have had a long-standing interest in why people become terrorists, but only within the past 15 years has the term "radicalization" been so widely used in the scholarly literature (Helfstein, 2012; Kruklis, 2014; Richards, 2015; Schmid, 2013). Despite the surge in scholarly attention, however, as Githens-Mazer and Lambert (2010) have noted, "radicalization is a research topic plagued by assumption and intuition, unhappily dominated by 'conventional wisdom' rather than systematic scientific and empirically based research" (p. 889). Indeed, there seems to be little consensus among researchers or policymakers even about how to define the concepts of "radicalism" and "extremism" (Hopkins & Kahani-Hopkins, 2009; Sedgwick, 2010). How we define those problems, however, has profound implications for how we understand and address them.

Neuman (2010), for example, drawing in part from *The Palgrave Macmillan Dictionary of Political Thought*, offers a politically focused view on extremism:

> Extremism can be used to refer to political ideologies that oppose a society's core values and principles. In the context of liberal democracies this could be applied to any ideology that advocates racial or religious supremacy and/or opposes the core principles of democracy and universal human rights. The term can also be used to describe the methods through which political actors attempt to realise their aims, that is, by using means that show disregard for the life, liberty, and human rights of others.

This definitional scheme merges the concepts of ideology and behavior. The approach is understandable and not uncommon, but it can confuse, rather than clarify, the underlying constructs. There is no question that radical or extreme ideologies are important to study and understand. However, terrorism requires behavior. Many—perhaps most—people with radical ideas and violent justifications do not engage in terrorism. So, we need to understand how and when extremist ideology and behavior are connected—and also potentially when they are not (Klein, 2015; Taylor & Horgan, 2006). The study of radicalization will be improved by understanding both the connections and the distinctions.

The UK's Home Office (2011), in its CONTEST counterterrorism strategy, defines radicalization simply as:

> … the process by which people come to support terrorism and violent extremism and, in some cases, then to join terrorist groups.

McCauley and Moskalenko (2008) focus more on its mechanisms and group dynamics in defining radicalization as:

> Increasing extremity of beliefs, feelings, and behaviors in directions that increasingly justify intergroup violence and demand sacrifice in defense of the in-group (p. 416).

Most recently, Crossett and Spitaletta (2010) attempted a broadly reaching review of psychological and sociological concepts in radicalization. They defined radicalization as:

> … the process by which an individual, group, or mass of people undergo a transformation from participating in the political process via legal means to the use or support of violence for political purposes (radicalism) (p. 10).

The ideological–behavioral distinctions are important to bear in mind. Klandermans (1984), in the study of social movements, has distinguished between the concepts of *consensus mobilization*, referring to the process of convincing people to support a movement's ends and means, and *action mobilization*, which involves getting people to act through those means to achieve the desired ends. I have attempted previously to parse the ideological and behavioral elements by referring to *radicalization* as the process of developing extremist ideologies and beliefs, and to *action pathways* as the process of engaging in terrorism or violent extremist actions (Borum, 2011c). The action reference harmonizes with Klandermans' concept of "action mobilization." These terms and concepts are probably imprecise and inadequate, but as this chapter seeks to describe the etiology of radicalization, the ideological–behavioral distinctions are important to bear in mind.

An inquiry into the etiology of radicalization should focus on *how* people come to think what they think, and, ultimately, how they progress—or not—from thinking to action. This requires a broad, multidisciplinary view of the problem that can address the roles of micro-level (individual) and macro-level (societal/cultural) factors (Snow, Rochford, Worden, & Benford, 1986; Veldhuis & Staun, 2009), and account for the fact that different pathways and mechanisms operate in different ways for different people at different points in time, and perhaps in different contexts (Bokhari, Hegghammer, Lia, Nesser, & Tonnessen, 2006). There may be no grand framework for radicalization, but social science theories and conceptual models may contribute to a better understanding of the process (Crossett & Spitaletta, 2010).

Contributions of Social Science Theories

Numerous social science theories have been invoked over the years to explain the underlying causes, concepts, and processes of how people come to be involved with radical groups and movements (Crossett & Spitaletta, 2010). Collectively, these theoretical applications have helped to frame the discussion; identify or clarify key concepts and distinctions; and illuminate variations as well as common patterns in the mass-, group-, and individual-level processes.

Mass/Macro-Level Processes

Focusing on the mass/macro-level, in the 1940s, social movement theory (SMT) proposed that change-oriented movements typically arose from irrational processes of collective behavior occurring under strained environmental conditions (what sociologists would call *strain theory*), producing a sentiment of discontent within a population (Zald & McCarthy, 1987). The prevailing wisdom was that individuals would "join" such a movement because they passively succumbed to these overwhelming social forces.

By the 1980s and 1990s, however, SMT's focus had shifted from the passive effects of societal strains to examining the rational and strategic dynamics that operate within groups to support the survival and growth of the movement. Klandermans and Oegema (1987), for example, suggested that the key tasks for all social movements were to form mobilization potential (developing the movement's human resources so that different people within the same set of beliefs come to assume different roles and take different kinds of actions); form and motivate recruitment networks; arouse member's motivation to participate; and remove barriers to participation (Klandermans & Oegema, 1987). *New social movement* (NSM) theory, which focuses more on macro/structural processes, and *resource mobilization* (RM) theory, which focuses more on contextual processes such as group dynamics, contributed significantly to SMT's evolution.

Group-Level Processes

Focusing more on the group level, theoretical and empirical contributions from the field of social psychology—a sub-discipline concerned primarily with relationships, influences, and transactions among people, and particularly group behavior—have expanded and refined the body of knowledge on group-related dynamics.

- *Group polarization*: Individual opinions and attitudes become more extreme in a group context. As group members discuss positions and attempt to come to consensus, group opinions and attitudes become more extreme than those initially held by its individual members (Isenberg, 1986; Myers & Lamm, 1976).
- *Groupthink*: This refers to a group dynamic in which group members attempt excessively to reach an agreement, to the point where the need for consensus overrides the goal of making the most appropriate decision (Esser, 1998; Janis, 1982). The result is that group decisions are more biased and less rational than individual decisions (Tsintsadze-Maass & Maass, 2014).
- *Intergroup (in-group/out-group) bias*: Group perceptions are affected in a self-serving way by group membership. People tend to identify, attribute, and classify behaviors of

members from their own groups more positively than those outside the group ("out-group"), who they identify as having more negative traits and behaviors (Mullen, Brown & Smith, 1992; Verkuyten & Nekuee, 1999).

- *Intergroup competition*: There often exists an implicit "competition" between groups, even among those who share affinity with a cause/idea. Potential members may perceive groups that are more extreme to be more committed and, therefore, more attractive (Cikara, Botvinick & Fiske, 2011; Rabbie & Wilkens, 1971). Moreover, when a group experiences threat or adversity from an outside competitor, two dynamics often occur: (1) cohesion within the in-group tends to increase (often along with increased in-group compliance), and (2) group attrition occurs among the less-committed (and often less extreme) members (McCauley & Moskalenko, 2008).
- *Intragroup competition*: Perceived threat and adversity also may come from competing factions *within* a given group. Sometimes these factional struggles create "splinter" groups that compete (and sometimes fight) with one another about which is more committed and extreme (Goldman, Stockbauer & McAuliffe, 1977; Jennings & Roelfsema, 2008).
- *Deindividuation*: Studies in social psychology have demonstrated that individuals (and individual group members) often feel less responsible and/or less morally accountable for "group" actions (Diener, 1979; Postmes & Spears, 1998). This may lower some of the social/psychological barriers to members taking extreme (including violent) action (McCauley & Segal, 1987).
- *Group norms*: Groups have a set of internal norms—implicit and explicit expectations for what/how individual members can think and how they can behave—that guide and control its members (Feldman, 1984; Terry & Hogg, 1996). In general, when groups are more cohesive, more isolated, or invoke high costs for dissent, group conformity is even stronger and conditions for compliance/obedience are elevated (McCauley & Segal, 1987).

These group-related dynamics have been applied specifically to the study of terrorist/ extremist collectives and their behavior.

Individual-Level Processes

Concerning the role of the individual in the radicalization process, perspectives from the social and behavioral sciences have evolved considerably. From some of the earliest efforts through the 1970s, the role of the individual in terrorism was assumed to emanate from a mental or personality abnormality. These early analyses often offered "clinical" explanations for terrorism. Similarly, attempts were made with sanguinity to identify a unique terrorist profile. Empirical research on these questions, however, has firmly debunked the notion that only "crazy" people engage in terrorism and has yet to reveal a meaningful and stable terrorist profile (Borum, 2004; Crenshaw, 1992; Horgan, 2008; Humaidi, 2012; Ruby, 2002; Silke, 1998; Victoroff, 2005). Fortunately, with very few exceptions, most contemporary social scientists studying terrorism have moved past these early, naïve assumptions.

A more recent line of inquiry looks beyond psychological or psychiatric abnormality, to explore how otherwise normal mental states and processes—built on characteristic attitudes, dispositions, inclinations, and intentions—might affect a person's propensity for involvement with violent extremist groups and actions. Reframing the "psychology of terrorism" in this way, it is suggested that an individual's mindset and worldview establish a psychological "climate" (Figure 1.1), within which various vulnerabilities and propensities shape ideas
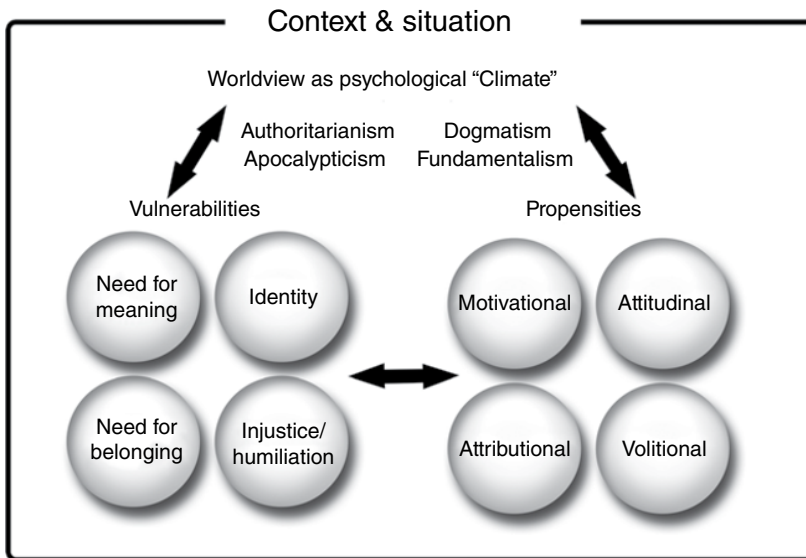
Figure 1.1   A Psychological Model of Radicalization Processes

and behaviors in ways that can increase the person's risk or likelihood of involvement in violent extremism (Borum, 2014; Weenink, 2015).

Worldviews encompass the ways in which we make sense and meaning of the world and our experience in it (Duckitt & Fisher, 2003; Sire, 2004). They can be both drivers and products of psychological propensities that may increase receptivity to extremist ideology and perhaps to justifications for terrorist violence. Four non-independent worldview factors in particular—authoritarianism, dogmatism, apocalypticism, and the fundamentalist mindset—are recurring themes in the literature on extremist violence (Gregg, 2016).

- *Authoritarianism*: As conceptualized by Altemeyer (1996), authoritarianism is characterized by a rigid, dualistic cognitive style and intolerance of ambiguity. It is a stable, learned, social attitude with three facets: submission to authority, staunch conventionalism, and anger and aggression toward out-groups (Hetherington & Suhay, 2011, p. 547). It has been linked to a range of traits and attitudes that are consistent with militant, extremist ideologies, including opposition to democratic values, civil rights and liberties, and human rights (Seipel, Rippl, Kindervater, & Lederer, 2012).
- *Dogmatism*: The modern idea of dogmatism was pioneered by Rokeach (1954), who defines it as comprising: "(a) a relatively closed cognitive system of beliefs and disbeliefs about reality, (b) organized around a central set of beliefs about absolute authority which, in turn, (c) provides a framework for patterns of intolerance and qualified tolerance toward others."
- *Apocalypticism*: Apocalypticism or apocalyptic thinking "locates the problem of evil in time and looks forward to its imminent resolution" (O'Leary, 1994, p. 6). Apocalyptic thinkers perceive death as a collective event and believe that history—past and future—is determined, and that they have a blueprint (from writings or teachings) about how it will unfold.

- *Fundamentalist mindset*: The fundamentalist mindset is characterized by dualistic thinking, paranoid ideas, an apocalyptic orientation, focus on a charismatic leader, and a totalized conversion experience (Galen, 2011; Rogers et al., 2007; Strozier, Terman, Jones, & Boyd; 2010; Strozier & Boyd, 2010b).

These worldviews can both reflect and potentiate individuals' mindsets and their characteristic traits and behaviors. A particular worldview or mindset does not necessarily cause radicalization or violent extremism, but it can create or enable vulnerabilities and propensities to affiliate with extremist groups or to become involved in terrorism in various ways.

Psychological vulnerabilities or "need" states often create an opening that can increase a person's receptivity to imposed ideas, influence, and sometimes even to seeking alternative worldviews. They can shape attitudes toward a particular class of victims/targets, volitional control over their impulses and behaviors, or their appraisals of threats and grievances (Ramswell, 2014). Three specific psychological vulnerabilities have been commonly observed among violent extremists: (1) a need for personal meaning and identity; (2) a need for belonging; and (3) perceived injustice/humiliation (Borum, 2004, 2011a, 2011b).

Psychological propensities—pertaining to motivation, attributional style, volition, and attitudes—can also affect the likelihood or nature of a person's attraction to radical ideas or involvement with violent extremism. Motivationally, people can be affected both by "push factors," which are often grievance-related, and "pull factors," which are often material or expressive perceived incentives (Horgan, 2008). Attributional styles are based on "explanations people generate regarding the causes of positive and negative events in their lives" (Penn, Sanna, & Roberts, 2008, p. 409)—whether those events are driven by themselves, by others, or by situational factors. Volitional propensities comprise the nature and degree of control that persons have over their emotions, motivations/needs, thoughts, impulses, and behaviors to achieve functional goals (Hautzinger, 1994; Kuhl, 1994).

Attitudes comprise a person's internal appraisals of people, objects, events, and issues that predispose them to respond favorably or unfavorably. Attitudinal propensities that might increase risk of radicalization or involvement in violent extremism include those that endorse the legitimacy and effectiveness of terrorism (and violence more generally) as a tactic (Brand & Anastasio, 2006; Felson, Liska, South, & McNulty, 1994; Heimer, 1997; Markowitz & Felson, 1998; Polaschek, Collie, & Walkey, 2004; Stankov et al., 2010); those pertaining to grievances and injustice (Chernick, 2004); external threat (Lerner & Keltner, 2000, 2001; Lerner, Gonzalez, Small, & Fischhoff, 2003); sensation seeking (Baumeister & Campbell, 1999; Katz, 1988; Woodworth & Porter, 2002); and disinhibition (Bandura, 1990, 2004; Sykes & Matza, 1957).

Integrating Factors at Multiple Levels

Decades ago, Lofland and Stark (1965) described an approach to extremism that integrates social, psychological, and situational factors. Their "World-Saver" model blended the traditional, deterministic, sociological "strain" factors with the more dynamic principles of social influence. In their model, the authors parse their contributing factors into the categories of "predisposing conditions" and "situational factors." "Predisposing conditions" comprise acutely felt tensions, occurring in a religious problem-solving perspective, leading one to self-define as a religious seeker. The tensions traditionally reflect general strain factors such as stressors, losses, and thwarted expectations. "Situational factors" comprise

the remaining four: exposure during a turning point in life; affective bond with the group; neutralizing attachments outside the group; and exposure to intensive interaction within the group. In the model, these four factors are posited to predict why a convert connects to one particular group, instead of another. Though Lofland and Stark (1965) conceived of this model nearly a half-century ago as they sought to explain enlistments into a relatively small West Coast cult, its conceptual utility offers a framework for understanding how individual factors interact with situational/contextual factors throughout the radicalization and engagement process.

Studying factors driving the militant Islamist radicalization process in Europe, Precht (2007) also examined the combined influence of historical and dynamic situational factors. He describes the three major groupings as (1) *background factors*, which include personal struggles with religious identity, experiences with discrimination, and lack of social integration; (2) *trigger factors*, to include people—such as a mentor or charismatic leader—and events—such as policy actions—that might provoke or incite either antipathy or activism; and (3) *opportunity factors*, which account for an individual's degree of access and likelihood of exposure to extremist ideas or adherents in physical and virtual spaces within her or his sphere of activity. Precht (2007) concludes that:

> Largely, homegrown terrorism can be viewed as a sociological phenomenon where issues such as belonging, identity, group dynamics and values are important elements in the transformation process. Religion plays an important role, but for some it rather serves as a vehicle for fulfilling other goals. A common denominator seems to be that the involved persons are at a crossroad in their life and wanting a cause.

In 2008, the Center for Strategic and International Studies (CSIS), aggregating the opinions of experts convened to study the "hearts and minds" aspect of radicalization, developed a multi-level framework of factors based on "three overlapping, but distinct elements that motivate individuals to becoming radicalized or committing terrorist acts": (1) the ideas of the radical narrative that provide a filter for understanding the world; (2) the sociological factors that compel an individual to embrace this radical narrative; and (3) psychological factors, characteristics, pathologies, and triggers that may prompt an individual to use violence to promote or consummate this narrative.

While demographic and socio-economic factors, according to the report, do not emerge as strong predictors of radicalization, feelings of shame and humiliation often serve to forge a bond between a vulnerable individual and a charismatic leader, and catalyzes acceptance of the radical narrative and its associated values and attitudes (also see Braddock, 2015).

More recently, Kruglanski and colleagues (Kruglanski, Gelfand, Bélanger, Sheveland, Hetiarachchi, & Gunaratna, 2014) developed a model of radicalization centered on the quest for personal significance. This framework has three components. The *motivational* component defines and drives the individual's goal, which the authors argue is the "quest for personal significance." The *ideological* component determines the proper means to achieve that goal (i.e., through violence). And the *social process* (including group dynamics) component arbitrates how the individual comes to embrace the goal and justify the means.

According to the authors, the significance quest typically is "awakened" or activated either by a loss of significance (e.g., humiliation), an anticipated or threatened loss of significance, or the potential for significant gain. The drive for significance unites the many motivational themes highlighted in other terrorist typologies, such as seeking revenge, status, and identity (Venhaus, 2010).

Common Elements in Integrated Models

The common mechanisms among these (and similar operational) frameworks appear more frequently than any unique elements (Borum, 2011b). This suggests that operational and social science researchers may fundamentally agree on the key factors in the radicalization process, but conceptually parse those factors in different ways. Common factors most frequently noted include the following:

Predisposing life experiences: These are typically historical factors, meaning they precede, but do not directly cause, the shift toward a violent extremist ideology. These include experiences that may be more distal or enduring, such as exposure to discrimination and sociological "strain" factors. These correspond to Lofland and Stark's "predisposing conditions" (and to the situational factor they describe as "exposure during a turning point in life"); to Precht's "background factors" and "trigger factors"; to CSIS' "sociological factors," and to Kruglanski's "significance loss."

Activating situations: These include experiences that may be more proximal and acute, such as a particular state policy or action. These correspond to the situational factor that Lofland and Stark describe as "exposure during a turning point in life," to Precht's "trigger factors," and have some affinity with CSIS' "sociological factors" and Kruglanski's actual or anticipated "significance loss." Opportunity factors may affect the likelihood of exposure. These may drive grievances that enhance motivation to engage in extremist action.

Predisposing vulnerabilities: These are typically psychological or psychosocial vulnerabilities or "need" states (e.g., need for belonging or personal meaning) that can push an individual to seek an alternative worldview or increase his/her receptivity to imposed ideas and influence. These vulnerabilities can also stimulate or intensify motivations for radical involvement. These have affinity with Lofland and Stark's "predisposing conditions," CSIS' "psychological factors," and correspond directly to Kruglanski's concepts of "significance loss."

Social and group dynamics: These are social factors that (a) facilitate an individual's engagement and intensification with a radical group or collective, its ideology, and corresponding narrative, and (b) facilitate adoption and intensification of the collective's in-group–out-group ethos (e.g., the narrative about the out-group adversary and the need to defend against the threat that they pose) (Thomas, McGarty, & Louis, 2014). These correspond primarily to social psychological factors and parallel Kruglanski's "social processes."

Ideology/narrative: Ideology operates as a collective narrative about the nature of a grievance and who is responsible (blameworthy) for it. The radical narrative articulates with social and group dynamics to affect the individual's attitudes toward extremist action and his/her behavior (Braddock, 2015). The ideology element is more explicit in some frameworks and more implicit in others, but corresponds distinctly to CSIS' ideas of the radical narrative that provide a filter for understanding the world and to Kruglanski's "ideological component."

How Radicalization Develops Parameters
of the Radicalization Process

The radicalization process does not unfold in the same way for all people. The mechanisms will vary even among those who may be exposed to the same factors and conditions. Radicalization occurs through a process, typically either through gradual escalation, or as a

series of discrete actions or decisions that prime an individual for what should occur at the next level. While the exact mechanisms and sequences of these changes are matters of some debate, it is certainly clear that different pathways and mechanisms operate in different ways for different people. McCauley and Moskalenko (2010) note that:

> There are many paths to radicalization that do not involve ideology. Some join a radical group for thrill and status, some for love, some for connection and comradeship. Personal and group grievance can move individuals toward violence, with ideology serving only to rationalize the violence. (p. 89)

Radicalization is variously described in the literature as evolving through phases, stages, or just by escalation. Radicalization, of course, does not equate with terrorism. Most people who hold radical ideas do not engage in terrorism, and some terrorists are not driven primarily by their ideologies. The distinctions between those who choose not to not engage in extremist violence, although they believe violence to further a cause is justified or even mandated, and those who do engage in extremist violence—whatever the depth of their belief about the justification for it—is an important, but empirically unsettled question.

Arie Kruglanski and his colleagues (2014) have proposed that radicalization exists as a continuum, and distinctions between those who believe in the justification for violence to further a cause and those who actually engage in that type of violence are simply a matter of "degree."

> A person who merely supports the idea of terrorism while going about her/his everyday business (hence attending to the panoply of her/his other goals) is thus said to be less radical-ized than a person who actually joins a terrorist organization. In turn, a noncombatant member of a terrorist organization, an office clerk, a cook, or computer expert whose life in the organi-zation allows various alternative pursuits is less radicalized than a fighter who actually takes up arms and actively risks life and limb for the cause; in these terms, the most extremely radicalized individual is the suicide bomber ready to sacrifice all for the cause… (p. 71).

Empirically, however, it is unclear whether systematic and significant differences may exist between the believers and the doers. If such differences do exist, they may involve differing social psychological mechanisms, pertain to individual characteristics (e.g., vulner-abilities and propensities), and/or relate to contrasting life experiences, situations, or group dynamics.

Nature and Progression of the Radicalization Process

Since September 11, 2001 (9/11), numerous articles, reports, and papers have presented characterizations and conceptual models of the radicalization process (see Borum, 2011b, for a review), particularly as it relates to militant jihadism. None of them yet has a very firm social-scientific basis, and notably few of them have been subjected to any rigorous scientific or systematic inquiry.

Some of those efforts have focused on motivational typologies, while others have posited a sequencing of stages. McCauley and Moskalenko (2008) drew directly on established social psychological principles to produce a taxonomy of radicalization mechanisms (which they define as "the means or manner in which something is accomplished") at the

individual, group, and mass levels. At the individual level, they describe four mechanisms: *individual radicalization through personal victimization*, in which a person becomes radicalized as a result of some (perceived) harm or injustice perpetrated upon him/her or a loved one; *individual radicalization through political grievance*, where radicalization occurs as a result of some harm or injustice perpetrated upon, or threatening, a group with which the person identifies; *individual radicalization in joining a radical group—the slippery slope—* the mechanism by which a person first engages with a radical group or persons espousing a radical ideology and follows a progressive, though sometimes insidious, progression of subversive behaviors, sometimes culminating in terrorism; and *individual radicalization in joining a radical group—the power of love*, in which a person engages with a radical group or persons espousing a radical ideology because of social or emotional bonds to its members, and those bonds become the impetus for action on behalf of the group.

At the group level, they describe five mechanisms: (1) *group radicalization in like-minded groups*, based on the social psychological concept of group polarization, a dynamic in which discussion of the issues increase consensus and shift the "average" group opinion in a more extreme direction; (2) *group radicalization under isolation and threat*, based on the increase in group cohesion that occurs when the collective perceives that they are under threat; (3) *group radicalization in competition for the same base of support*, based on a phenomenon in which groups competing for the same class of members distinguish themselves and elevate their status by becoming "more radical" than the others; (4) *group radicalization in competition with state power—condensation*, based on a dynamic that occurs when groups act against the state, the state's repressive response to those groups escalate, consequences for protest increase, causing the less committed to drop out, "condensing" a small committed core that is highly radicalized; and (5) *group radicalization in within-group competition—fissioning*, a process that occurs when there is conflict within the group and those in the minority are marginalized or expelled.

At the mass level, McCauley and Mosalenko describe the final three mechanisms: (1) *mass radicalization in conflict with an out-group—jujitsu politics*, a characterization of group dynamics in which "outgroup threat leads reliably to increased group cohesion, increased respect for ingroup leaders, increased sanctions for ingroup deviates, and idealization of ingroup norms" (p. 426); (2) *mass radicalization in conflict with an out-group—hate*, a phenomenon that occurs when negative perceptions of the out-group escalate to the point where its members are dehumanized by the in-group; and (3) *mass radicalization in conflict with an out-group—martyrdom*, a phenomenon in which having members willing to die for a cause increases the cause's credibility and the martyrs consequently are revered and given increased status (see also Perry & Hasisi, 2015; Moskalenko & McCauley, 2012).

Taking a different approach, Venhaus (2010) sought to illuminate mechanisms of radicalization by focusing on the primary driving (or causal) motivation. He based his analysis on records and interviews with more than 2,000 "foreign fighters" seeking to affiliate with al-Qaeda-related movements. His overarching conclusion that "they all were looking for something … they want to understand who they are, why they matter, and what their role in the world should be. They have an unfulfilled need to define themselves, which al-Qaeda offers to fill." Referring to the potential recruits as "seekers," Venhaus (2010) categorized them into four primary types: (1) *The Revenge Seeker*, who is diffusely frustrated and angry and seeking an outlet to discharge that frustration or anger toward some person, group, or entity whom he or she may see as being at fault; (2) *The Status Seeker*, seeking recognition and esteem from others; (3) *The Identity Seeker*, compelled by a need to belong and to be a part of something meaningful, seeks to define a sense of self through group

affiliations; and (4) *The Thrill Seeker*, who is attracted to the group because of the prospects for excitement, adventure, and glory.

The categories represented in Venhaus' seeker typology or in McCauley and Moskalenko's mechanisms are not mutually exclusive. In fact, it is quite likely that multiple elements often exist in any given case, and that the relative importance of these dimensions of the individual change over time and across situations.

Process Models

Some radicalization models suggest that the process progresses through a sequencing of stages. The accuracy and stability of the proposed stages, however, has not been rigorously tested. Walter Laqueur (2003) has said of terrorism that the quest for a "general theory" is misguided: "Many terrorisms exist, and their character has changed over time and from country to country." This seems to be equally true for the radicalization process itself, so no single model may adequately represent the process for all people.

Borum (2003) proposed an early, operationally driven four-stage model based on anecdotal evidence. The first part of the process involves framing some unsatisfying event, condition, or grievance (*It's not right*) as being unjust (*It's not fair*). The injustice is blamed on a target policy, person, or nation (*It's your fault*). The responsible party is then vilified—often demonized—(*You're evil*), which facilitates justification or impetus for aggression. The model was developed originally as a heuristic for law enforcement, not as a formal social science theory.

Moghaddam (2005) described a similar progression, but linked them more systematically to psychological constructs using the metaphor of "staircase" that ascends through five levels. The staircase "narrows" and fewer people ascend to each successive level, leaving a relatively small number of people who actually progress to the point where they engage in terrorism.

The initial step on the pathway to terrorism, according to the model, typically arises from feelings of discontent and perceived adversity (framed as "perceived deprivation"), which people seek to alleviate. When those attempts are unsuccessful, they become frustrated, leading to feelings of aggression, which are displaced onto some perceived causal agent (who is then regarded as an enemy). With increasing anger directed toward the enemy, some come to sympathize with the violent, extremist ideology of the terrorist groups that act against them. Some of those sympathizers eventually join an extremist group, organization, or movement that advocates for, and perhaps engages in, terrorist violence. At the "top" or final level among those who have joined are those who overcome any barriers to action and actually commit a terrorist act.

In 2007, based on a qualitative review commissioned by the Danish Ministry of Justice, Precht (2007) outlined a four-phase "typical pattern of radicalization" comprising *pre-radicalization*; *conversion and identification with radical Islam*; *indoctrination and increased group bonding*; and *actual acts of terrorism or planned plots*. He summarized the broad contours of radicalization in the following way:

> Radicalisation often starts with individuals who are frustrated with their lives, society or the foreign policy of their governments. A typical pattern is that these individuals meet other like-minded people, and together they go through a series of events and phases that ultimately can result in terrorism. However, only a few end up becoming terrorists. The rest stop or drop out of the radicalisation process at different phases.

Most of the conceptual models of radicalization implicitly characterize it as a "bottom-up" process of "joining," rather than a "top-down" process of recruitment. Sageman (2008) makes this point quite explicitly with regard to the militant jihadists he has studied, describing them as "young men chasing thrills, fantasies of glory and sense of belonging to group and cause" who mobilize through social networks. This is sometimes referred to as Sageman's "bunch of guys" theory of radicalization (Sageman, 2004). These collectives, he finds, often share a sense of global or local "moral outrage" and grievous personal experiences, and are driven more by anti-American and anti-Semitic sentiments than by deep Islamic doctrine.

Conclusion

While much about radicalization remains empirically unvalidated, it is clear that the process is multi-determined, and that its etiology often includes broad grievances that "push" an individual toward a radical ideology and the narrower, more specific "pull" factors that attract them. Many times, the factors are transactive (affecting each other). Some have ideological commitments that lead them to particular group affiliations, while others start with social or group affiliations that lead to ideological commitments. Socially facilitated entry is quite common, but certainly not universal. Beyond that, there is very little that is "typical" about radicalization into violent extremism. In fact, what is perhaps most striking about radicalization is its diversity—both in who becomes radicalized and how. Scholars have debated whether radicalization into militant Jihadism is a "bottom–up" process of "joining," or a "top–down" process driven by recruitment. The truth is that both mechanisms are active, and they operate differently for different people in different contexts—and sometimes even for the same person at different points in time. It is also clear that different pathways can lead to radicalization, and conversely, different persons on a shared pathway or trajectory may have different outcomes. Social science theories and models have helped to create a better conceptual understanding of radicalization and, in some cases, to promote more systematic and focused inquiry.

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2

Psychological Factors in Radicalization: A "3 N" Approach

David Webber and Arie W. Kruglanski

In this chapter, we discuss the process of radicalization: the process whereby an individual adopts radical means as the method of choice for goal attainment. A radical or extreme means is any means that is non-normative or unusual. Some means are normative and accepted by society. For instance, if a group was displeased with the presence of a foreign military force in their country, they could elect leaders aimed at remedying the situation. Other means are extreme. That same group could unleash a cadre of suicide bombers on the community in an effort to force the government's hand. Both means attempt to achieve the same goal, but only the latter is radical.

Radicalization is a process that occurs over an extended period. There is no clear evidence that personality traits, psychological disorders, or psychopathic tendencies distinguish terrorists from the general population (Horgan, 2005). However, there is evidence that these qualities may differentiate different types or terrorists, for instance, with lone-actor terrorists (and particularly "true" lone wolves without command and control links) evincing higher rates of mental illness than those who operate within a group (e.g., Corner & Gill, 2015; Gill, Horgan, & Deckert, 2014; Gruenewald, Chermak, & Freilich, 2013; Hewitt, 2003). Still, even among lone actors, those with mental illness comprise the minority (ranging between 22% and 40%, depending on the study). Likewise, evidence suggests that terrorists are equally or more educated than the general populations from which they come (e.g., Atran, 2003; Pape, 2005). Further, even the most extreme terrorists, the suicide bombers, do not exhibit depressive symptoms or suicidal ideation (e.g., Post et al., 2009; Townsend, 2007; except see Lankford, 2013).

What then motivates these "normal" individuals to become radical? We propose the answer lies at the intersection of three psychological forces labeled as the "3 Ns": (1) the *needs* or motivation of the individual, (2) the ideological *narratives* of the culture in which the individual is embedded, and (3) the dynamic interplay of group pressure and social influence that occurs within the individual's social *network*. We discuss each in turn.

Needs: Individual Motivation

The first factor is the individual's motivation for radicalizing. Before continuing, it is worth noting that there is a clear distinction between the motivation(s) of the individual terrorist and the motivation(s) of the organization to which he/she belongs. Organizational goals have been discussed widely. They tend to be religious or political in nature—for instance, removing occupying forces from one's homeland (Pape, 2005), or instituting an Islamic Caliphate (i.e., the Islamic State of Iraq and the Levant or ISIS). Other organizational motives include sparking violence between non-state actors (Hafez, 2007), and signaling the organizations' commitment to the cause in an effort to "outbid" other insurgent groups (Bloom, 2004).

Researchers have similarly proposed an array of reasons to explain individual motives of individual terrorists. These include but are not limited to honor, humiliation, injustice, vengeance, social status, monetary benefits, loyalty to a leader, and the desire to enter heaven (e.g., Bloom, 2004; Gambetta, 2005; Stern, 2004). On the surface, these individual motives appear varied and unrelated. Indeed, this has led some to argue that it is unwise to search for a single common motivator of terrorists (e.g., Bloom, 2009). The present analysis, however, conceives of these seemingly disparate motives as driven by the same underlying motivational force, namely, the *quest for significance* (Kruglanski et al., 2009, 2013, 2014).

The quest represents the fundamental human need to matter—to be someone, to be respected in the eyes of others, to earn a sense of self-worth (Becker, 1971; Fiske, 2010; Frankl, 2000). Consider the following recasting of several of these motives as specific instantiations of the significance quest. *Honor* and *social status* are simply different words that denote earning value, respect, or significance. For *vengeance*, one could want revenge against those who have caused harm to herself, her family, or her group. This harm likely lowers one's sense of value and significance. Vengeance thus reciprocates the humiliation and restores lost significance. *Loyalty* to the leader, alternatively, can be viewed as an individual devoting himself or herself to, what is in his or her eyes, the "ultimate authority," so that the leader may bestow him or her with feelings of significance. This was certainly the case for members of elite squads of suicide members within the Liberation Tigers of Tamil Eelam, who were often granted the honor of dining with their leader, Velupillai Prabhakaran, prior to their suicide missions.

Triggering the Quest for Significance

As is the case with all motivational forces (Kruglanski, Chernikova, Rosenzweig, & Kopetz, 2014), the motivation to earn significance is not dominant at all times. Thus, the pathway to radicalization often begins with some kind of triggering event that activates the significance motive. The notion of a triggering event is common in radicalization theories. For Horgan (2008), the path toward radicalization began with some instance of emotional vulnerability or disenfranchisement. McCauley and Moscalenko (2008) likewise discussed personal victimization or political grievance as trigger events, whereas Post (2002) discussed instances of attack or humiliation. In this vein, we see three broad categories of conditions that can trigger the significance motivation: (1) significance loss, (2) the threat of significance loss, and (3) significance gain (Kruglanski et al., 2014).

Significance Loss   Significance loss refers to any instance—such as some form of humiliation, dishonor, or shame—that causes an individual to feel insignificant. There are two basic varieties of loss. *Group-based loss* occurs when the humiliation or shame arises from one's group identity or category membership. In these circumstances, attacks are levied at groups to which the individual belongs. Given the importance of group identity to one's personal feelings of worth (Tajfel & Turner, 1986), these actions can have a profound motivating influence on the individual. This type of loss may be acutely felt by Muslim immigrants to Europe who encounter widespread disrespect on part of native populations in their host countries (Kruglanski, Crenshaw, Post, & Victoroff, 2008; Sageman, 2004). This is also possibly why terrorist propagandists (e.g., al-Qaeda's Anwar al Awlaki, or Yehia al Libi) allude to injustice experienced by Muslims in remote world locations (e.g., Bosnia, Afghanistan, Iraq, or Syria) to imply that Muslims everywhere share their humiliation.

If the humiliation occurs because of or is directed at one's personal circumstances, we label it as *personal significance loss*. Any personal failure or transgression against an important social norm can suffice. Pedazhur's (2005) description of Palestinians who joined the ranks of suicide bombers as a result of suffering stigma within their community—for instance, through infertility, an HIV-positive diagnosis, or divorce—provides a clear example. These circumstances were unrelated to the attackers' Palestinian identity and the Palestinian–Israeli conflict, yet they were perceived as circumstances that could be redeemed by sacrificing on behalf of one's group. This characterization also applies to the Chechen "black widows" who were rendered powerless, and thus demeaned and humiliated, by having their significant others wrested from them by Russian forces (Speckhard & Akhmedova, 2005).

Potential Loss of Significance   In some cases, would-be terrorists are not motivated to overcome an actual loss of significance, but are instead motivated to prevent the feelings of insignificance that would be induced if they should fail to act on behalf of their group. Japanese Kamikaze pilots of World War II are an interesting example (Ohnuki-Tierney, 2006). In letters to loved ones, these pilots indicated that they did not want to die, nor did they expect heavenly rewards for their missions. However, had they refused the missions, unbearable shame and humiliation would have befallen them and their families, and it is such avoidance of significance loss that apparently motivated their actions.

Opportunity for Significance Gain   Finally, some are drawn by the allure of significance gain that accompanies the martyr or hero status earned as a result of terrorist actions. Indeed, this was the primary motivation for "megalomaniac hyper terrorists" (Sprinzak, 2009)—individuals such as Muhammad Atta, Bin Laden, Ramzi Yussuf, Ayman Zawahiri, and others who earned "greater than life" stature in the terrorist community. Also, consider what Post (2006) termed the "breeding in the bone" of suicide bombers. This concept refers to the indoctrination of children at Palestinian Hamas summer camps or the "Imam al-Mahdi scouts" of the Lebanese Hezbollah. These youth are taught to strive for martyrdom, and told that this will bring untold glory and significance. Interviews with former neo-Nazi leadership also reveal that the most important motivation for these individuals was the desire for expression, and they enlisted because they saw the group as a mechanism to collectively "exist for a thing" (Koehler, 2014).

Mechanisms Underlying Extremism

The aforementioned circumstances merely activate the goal to earn significance. It is then incumbent upon the individual to select a means deemed appropriate for achieving this goal (Kruglanski et al., 2002). Radical means are but a single option in this regard, and, to be selected, they must be preferred over other means. Interestingly, however, evidence suggests that these triggering events, particularly instances of significance loss, may actually predispose one to prefer extreme means to normative ones. It should be noted that theories of collective movements, deviance, and criminal behavior (all of which treat terrorism as a special case) have used constructs similar to significance loss to explain terrorism (e.g., relative deprivation, Smith, Pettigrew, Pippin, & Bialosiewics, 2012; general strain theory, Agnew, 2010). These theories suggest that violent extremism is most likely to occur in response to grievances or humiliating events that occur at the social identity level. Agnew (this volume), for instance, theorizes that terrorism is most likely in response to "collective strains" that are intense, unjust, and caused by more powerful others. Although collective forms of loss are more directly tied to terroristic acts as the acts themselves are engaged on behalf of a collective, the present account does not make this same claim. As we outline in the sections that follow, there are psychological mechanisms present in the experience of both varieties of loss (collective vs. individual) that should increase the appeal of extremism, but that also shed light on how individual-based loss can lead one to behave violently on behalf of a collective.

Uncertainty and the Need for Cognitive Closure

The first mechanism centers on the psychological experience of these triggering events. These events induce personal uncertainty, that is, an inconsistency in how individuals want to perceive themselves, and how they must currently perceive themselves in light of current circumstances (McGregor, Zanna, Holmes, & Spencer, 2001). People are motivated to view themselves as moral, valued, good, and competent (Steele, 1988). A humiliating instance of significance loss, therefore, confronts one with evidence that threatens this perception and creates a discrepancy between one's current and expected state. Likewise, the allure of significance gain earned through future action makes apparent a discrepancy between the current state and some better future state. These discrepancies are experienced as uncertainty or anxiety that motivate behavior aimed at reducing the discrepancy and restoring certainty (e.g., Festinger, 1957).

This is important because extreme ideologies and groups are particularly suited to uncertainty reduction. The ideologies themselves tend to be "black and white" in nature, low in ambiguity, discourage open-mindedness, and comprise fundamentalist beliefs, thus making them highly appealing to those searching for certainty (Hogg, Kruglanski, & van den Bos, 2013). Similarly, group identification is a potent cure for uncertainty, but particularly identification with groups that are rigid in their organizational structure—for instance, characterized by the closed boundaries, hierarchical leadership structures, and internal homogeneity that define extremist groups (Hogg & Adelman, 2013). Indeed, past research has found that inducing uncertainty increases identification with radical groups that advance extreme actions, such as the blockading of school campuses and large-scale protests (Hogg, Meehan, & Farquharson, 2010).

More direct evidence was found in studies examining instances of lost significance. A series of experiments (Webber et al., 2015) found that inducing a collective loss of

significance via an attack to the prestige of one's university increased participants' feelings of uncertainty and endorsement of extreme political ideology (i.e., a hardline stance that prohibits compromising core liberal or conservative values at all costs). A similar relationship was found when looking at the need for cognitive closure (Webber et al., 2015). The need for closure represents a mindset whereby an individual has a low tolerance for ambiguity or uncertainty, and instead prefers to see things in a structured, clear-cut manner (Kruglanski & Webster, 1996). Surveys were conducted with various samples, including imprisoned members of former radical groups (i.e., the Liberation Tigers of Tamil Eelam, Abu Sayyaf Group in southern Philippines), and at-risk Muslim immigrants in Spain. Respondents indicated their feelings of significance, their need for closure, and various indices of extreme behavior specific to each locale (e.g., support for violence, Islamic extremism). Although feelings of insignificance were positively related to extremism, this relationship was explained (mediated) by the increased need for closure instilled by these insignificant feelings.

The Collectivistic Shift

Second, significance-quest-triggering events are theorized to orient individuals toward the in-group, that is, the collective to which they belong. This relative shift promotes an increased focus on the norms and values of the group, and decreases the focus on personal concerns. Evidence for this proposition can be gleaned from social psychological research conducted under the auspices of terror management theory (Greenberg, Pyszczynski, & Solomon, 1986). This work found that reminding individuals of their impending death, which for the present purposes constitutes a potent threat to one's significance, increased behavior aimed at defending the values of the collective (e.g., Greenberg, Simon, Porteus, Pyszczynski, & Solomon, 1995). One study required Americans to sift black dye out of a jar of sand. The only way to complete this task was to destroy an American flag by securing it to the open end of the jar, and pouring the dye through the flag. Participants reminded of their own death, relative to those in a control condition, took longer to complete the task. In other words, losing their significance focused them on the values of their culture, and they were then reluctant to violate those very values.

Still, other research induced a sense of lost significance through personal failure (Kruglanski & Orehek, 2011). In one study, half the participants were given false feedback that indicated they just failed a task, whereas the other half were told that they had performed well. Participants then completed a scale assessing self-construal (Singelis, 1994). Some individuals construe themselves in an independent manner, that is, they perceive of themselves in terms of internal attributes, personal traits, or abilities. Other individuals have an interdependent self-construal; they think of themselves in terms of relationships with others in their collective. Consistent with the collectivistic shift hypothesis, participants who experienced failure reported greater interdependent self-construal than those who experienced success.

By shifting people toward the norms and values of the group, triggering events increase the likelihood that individuals will defend their group. At the core, terrorist behavior requires that individuals defend the in-group against real or imagined detractors, so where such detractors were assumed to exist, individuals focused on their collective should also be more supportive of terrorism and violence against the out-group. Surveys conducted in more than a dozen Muslim countries found this very effect (Kruglanski & Orehek, 2011).

Respondents indicated if they primarily identified as (1) a member of their religion, (2) a member of their nation, or (3) an individual. Those who identified primarily as a member of their nation or religion were categorized as having interdependent self-construal, whereas those primarily identified as individuals had independent self-construal. Consistent with the present analysis, individuals with an interdependent self-construal expressed greater support for terrorism against the West.

Experiments that manipulated participants' self-construal provided further evidence for the tendency of individuals with an interdependent self-construal to self-sacrifice on the group's behalf (Orehek, Sasota, Kruglanski, Dechesne, & Ridgeway, 2014). Consider, as an example, one of the most commonly used self-construal manipulations (Gardner, Gabriel, & Lee, 1999). Participants read a short passage that described an excursion into the city, and their task was to circle all of the pronouns within this passage. Unbeknownst to the participants, in one version of the passage, all of the pronouns were singular (e.g., I, me, mine). This was designed to prime an independent self-construal. In the other version, the pronouns were plural (e.g., we, us, ours), thereby priming an interdependent self-construal. Orehek and colleagues (2014) found that participants primed with an interdependent self-construal were more willing to engage in self-sacrifice on behalf of the group. In one such study, participants faced a hypothetical moral dilemma; a trolley has jumped the tracks and is barreling toward several members of your in-group. The participant has a choice: (1) do nothing, and witness the death of your in-group members, or (2) hurl yourself in front of the trolley, effectively killing yourself, but saving the innocent in-group members from their impending doom. Participants primed with an interdependent self-construal were more likely to opt for the latter.

Sacred Values

Oftentimes, affronts to one's significance occur with respect to values perceived as sacred to the group, as opposed to those that are profane (Durkheim, 1915). Profane values refer to mundane concerns of daily life, whereas sacred values transcend everyday existence and refer to sublime concerns of quintessential centrality to the group. Important in this distinction is the notion that the sacred and the profane cannot intermingle. As Durkheim (1915) put it: "The sacred and profane are always and everywhere conceived by the human intellect as separate genera, as two worlds with nothing in common…" (p. 36). This means that we conceive of things that are sacred in a completely different way than we think about the profane; the profane can be understood on an instrumental or material scale (i.e., placing a monetary value on the goods one owns), whereas the sacred cannot (Ginges & Atran, 2009). Assume that some individuals value environmentalism. It is not inconceivable to imagine these individuals ceasing to recycle after moving far from the recycling depot and removing the sufficient incentive for recycling their cans and bottles. We would be hard-pressed to find mothers willing to sell their children to human traffickers, no matter how high the monetary offer. Likewise, individuals to whom recycling is sacred would scoff at the very notion of receiving compensation for their recycling behaviors, and would persist in this task absent incentive.

The ramification of holding a sacred value is that one becomes relatively unwilling to compromise on it. And, if the insignificance-instilling transgression occurred against one's sacred value, that individual is likely to respond with extreme action. Indeed, this effect has been borne out empirically (Ginges & Atran, 2009; Ginges, Atran, Medin, & Shikaki, 2007).

Participants were asked whether they would agree to compromise on an important value. For instance, Palestinians imagined having to compromise and relinquish Palestine's sovereignty over Jerusalem. Some participants were rewarded with a significant material incentive for this compromise: US$1,000 every year for the next 10 years. Commonsense suggests that adding material incentive should make that compromise more palatable. If those values are sacred, on the other hand, adding the material incentive may make the compromise more problematic, as people should be outraged at the very prospect of trading something sacred for something material. This is exactly what was found; those who held the holy land of Israel as sacred responded to the material incentive with increased outrage, and more importantly, increased support for violence in opposition to this compromise.

What these results clearly demonstrate is that when people compromise their sacred values, they do not react rationally. If they did, receiving a material incentive should ease the pain of compromise. These individuals become devoted actors. They respond to the compromise of values with increased aggression, anger, and even willingness to sacrifice themselves for the cause (Atran, Sheikh, & Gomez, 2014). Humiliating or threatening situations that compromise group-based values, thus, not only trigger events that induce intense feelings of insignificance for those who hold the values as sacred, but will also likely induce a mindset whereby devoted actors respond using extreme means.

Narratives: The Role of Ideology

According to our theory, the second psychological force affecting the radicalization process is the cultural narrative. In the previous sections, we discussed how events that trigger the significance quest increase the appeal of radical means to the end of significance. The present section considers the role of ideology in means choice. Individuals are not reinventing the wheel every time they select a means toward significance. Quite the opposite, in fact, they are restricted to choose from a list of culturally determined means that are socially shared and rooted in an ideology to which their group subscribes. Relevant to the present concerns, the ideology identifies those goals and the appropriate means to their attainment. To earn significance, for instance, one could follow the culturally prescribed pathways toward earning an education, landing a high-paying job, carving out their life with a significant other, becoming a famous musician, or earning notoriety as a serial killer or terrorist.

Becoming a terrorist is thus presented as a means to the attainment of significance. It is also a means that most individuals in a society steer clear of, given that the majority of the population deems it inappropriate and non-normative. Indeed, research conducted in support of terror management theory has found that instances of lost significance can motivate one to choose a variety of means toward significance restoration (e.g., Greenberg et al., 1990; Jonas et al., 2008; Rothschild, Abdollah, & Pyszczynski, 2009). People often respond to reminders of their inevitable death as a violent extremist might—they become increasingly derogatory and aggressive toward individuals that either belong to competing out-groups or violate societal norms (e.g., Greenberg et al., 1990). However, this reaction depends on whatever cultural norm is salient in the situation (Jonas et al., 2008). If prosocial norms are salient, individuals become more prosocial. The same is true when pacifism or conservatism is salient. In one study, Jonas and colleagues (2008) primed participants with words related to pacifism (e.g., peace, diplomacy, and harmony). Participants reminded of their death were more likely to endorse peace-promoting organizations such as Amnesty

International or the Red Cross than those not primed with a loss-inducing circumstance. Moreover, activating tolerance or compassion prevents one from responding radically in response to significance loss (Rothschild et al., 2009). Rothschild and colleagues (2009) exposed Christians to compassionate Bible scripture (e.g., "Love your neighbor as yourself") or Shiite Muslims to compassionate Koranic verses (e.g., "Do goodness to others because Allah loves those who do good"). This eliminated violent and aggressive attitudes in response to a death reminder.

Terrorism-justifying Ideology

Consistent with the foregoing analysis, violent extremism remains a viable option for those highly committed few if it is presented as a legitimate and effective means for achieving significance. Typically, this occurs through a *terrorism-justifying ideology* that defines the group's defense as the pre-eminent task that will be rewarded by glory and veneration (Zartman & Anstey, 2012). Of course, these ideologies will vary in their specific content— some may invoke religious teachings or scripture to justify acts of violence, whereas others may be purely nationalistic or ethnocentric in ethos. Regardless of the invoked content, its purpose is to suggest a means by which significance can be earned or restored—in this specific case, the means of terrorism and violence.

To compellingly depict violence as a means to significance, an ideology must include several elements. The first two involve identifying a *grievance* that has been perpetrated against the in-group, and then identifying the entity, or *culprit*, responsible for causing this grievance. Sometimes this grievance will be the direct consequence of antagonistic actions perpetuated by an enemy. In such circumstances, the grievance is directly connected to the responsible enemy. Other times, however, grievances can be attributed to a responsible entity via a process of scapegoating (Glick, 2005). This could occur during times when basic collective needs are frustrated (Tajfel, 1981), for instance, during times of economic hardship, famine, or widespread disease. Scapegoating occurs when these hardships are inexplicably blamed on an out-group (e.g., blaming the Jews for Germany's hardships in the aftermath of World War I). Assigning these hardships to a physical source—the out-group— increases people's perceptions that they can control their environment by eliminating the source of these hardships.

Next, the ideology must justify violence as an appropriate response toward addressing the culprit responsible for the grievance. The ideology must take violence and the harming of other individuals—things that are typically perceived as immoral and significance reducing—and transform them into legitimate actions. Essentially, the ideology provides its adherents with a justification that makes a specific instance of violence, say, detonating a suicide bomb on a bus filled with infidels, not only permissible, but also necessary and laudable. This changes the very definition of the act at hand, as people no longer consider legitimate forms of violence, such as the killing perpetrated when enmeshed in war, in the same category as unjustified forms of violence such as homicide and rape (Archer & Gartner, 1992). But more importantly, it frees the individual to act in this specific manner without feeling guilty for transgressing against morals (Bandura, 1999).

Immoral action can also be made permissible through the indirect route of delegitimizing the out-group against which the violent action will be perpetrated. Delegitimization is the "categorization of a group or groups into extremely negative social categories that

are excluded from the realm of acceptable norms and/or values" (Bar-Tal, 1990, p. 65). A common delegitimization strategy is dehumanization, that is, stripping the targets (group) of their human characteristics and portraying them as subhuman creatures such as cockroaches, rats, serpents, or apes (e.g., Bandura, Underwood, & Fromson, 1975; Haslam, 2006). Other strategies include outcasting groups as destructive to society—murderers, thieves, and psychopaths (Bar-Tal, 1990). In categorizing the "enemy" in ways that preclude them from standards of acceptable behavior, morality rules that typically apply to humans— for example, "thou shalt not kill"—no longer apply to the out-group, and one is freed to act against them violently without remorse or ramification (Bandura, 1999).

As an example, consider a classic study conducted by Bandura and colleagues (1975) where participants were recruited for a study that they believed assessed the effectiveness of electric shock punishment on decision-making. Prior to beginning the punishment task, participants heard the researchers briefly comment, in passing, about the soon-to-be-punished individuals. In one condition, the comments humanized the target group as "perceptive and understanding." In another condition, the comments dehumanized the targets as "an animalistic, rotten bunch." These minor comments were enough to significantly increase participants' willingness to punish these individuals with a higher degree of electric shock. If casual comments have such a profound effect on violent behavior, imagine the effectiveness of an entire propaganda narrative.

And, finally, if one is to perceive the means prescribed in the ideology as a potential mechanism for significance gain or restoration, one must believe that such means has a *high likelihood of success*. Failure only worsens the humiliation and deepens the insignif-icance that one may feel. Indeed, terrorism-advocating propagandists spin glamorous narratives that discuss the effectiveness of violence and portray the inevitable demise of the enemy. A common narrative employed by Russian Anarchists in the late nineteenth century and leftist terrorists of the 1970s and 1980s alike was that terrorism would reveal the state's impotence, unmask its hypocrisy, and thereby pave the way for revolution. Other narratives discuss how the enemy's potency is merely a façade that will crumble if attacked in vulnerable points, as evident in the "spider web" theory espoused by Hezbollah leader Sayyed Hassan Nasserallah and a 2003 sermon by Osama bin Laden (Ignatius, 2005).

Networks: Group Dynamics

The final component of the N-trilogy, networking or group dynamics, is no less important than the previous two. In fact, the validity of the terrorism-justifying ideology would itself crumble if it were not consensually shared within a larger group. Maintaining faith in these ideologies, as with all belief systems, requires consensual validation (e.g., Berger & Luckman, 1966). Festinger (1954), for instance, proposed that other people form the very basis by which we evaluate the correctness and appropriateness of our own actions. This notion was tested in a unique laboratory paradigm that pertains to the morality of killing (Webber, Schimel, Martens, Hayes, & Faucher, 2013). Participants completed an extermination task where they believed they were killing live insects. Afterward, the researchers manipulated consensual validation, leading some participants to believe their peers approved of the killing, and leading others to believe their peers disapproved of and refused to complete the killing task. When there was a lack of consensus, that is, when participants saw that others in their group disapproved, participants experienced significantly greater distress.

Without their peers to validate the task, participants were unable to perceive killing as morally justified, and were thus distressed by their actions. The same would be true of terrorists who, after finding that no one else is entranced by the justification narrative, may question the accuracy of their own beliefs.

It could be a difficult task to convince an entire nation that violence and extremism are acceptable, since such actions, by definition, are out of step with the majority in the community; typically, such majority tends to balance multiple life concerns rather than disproportionately committing to a single cause, embracing all means necessary in order to advance it. It is, on the other hand, easier to recruit a much smaller and focused subset of the population and get it to endorse extreme values. For instance, alienated individuals can find camaraderie in a mosque, and their common frustration can be channeled into extremism via ideas emanating from the preaching of a firebrand Imam (Sageman, 2004). According to Sageman (2008), post-9/11 "al-Qaeda" terrorist acts were typically perpetrated by small, local groups that merely branded themselves with the al-Qaeda name. Of course, given the appropriate circumstances, a confluence of different local groups can feed a stream of volunteers that augment an appealing violent organization, as illustrated by the recent success of ISIS in attracting to its ranks thousands of foreign fighters from scores of countries around the globe.

There are also ramifications of these dynamics for the actual perpetration of action. The social psychological literature is replete with studies showing that decisions made by small groups become more extreme than decisions made by individuals (e.g., Isenberg, 1986). Whenever you get a small group of likeminded individuals together to discuss a topic, be they a group of feminists gathering at the local coffeehouse or book club, or a group of terrorists meeting secretly in one of the member's homes, they will come out more extreme; the feminists and terrorists alike leave the meeting more assured of their beliefs than when they originally entered. Indeed, these group dynamics are critical components of several radicalization models (e.g., McCauley & Moskalenko, 2008; Post et al., 2002).

Oftentimes, however, these groups of radicals represent to the individual member more than just another social category to which they belong. They instead become a second family. In such cases, the individuals are "fused" with their group; they come to view their personal identity and their group identity as one (Swann, Jetten, Gomez, Whitehouse, & Bastian, 2012). They thus believe that, in acting on behalf of group goals, they are simultaneously acting on behalf of personal goals, as the individual is inseparable from the group. They also perceive the bonds between them and their group members as familial; they become a "band of brothers" as it were. Indeed, an overwhelming 96% of recently surveyed Libyan revolutionaries reported being fused with their battalions. For half these individuals, the bonds with their battalions were even stronger than the bonds with their own families (Whitehouse, McQuinn, Buhrmester, & Swann, 2014).

These processes are of considerable importance, given that such fused individuals are more willing to sacrifice themselves to protect the group, and more willing to engage in violence on behalf of the group (Swann, Gomez, Seyle, Morales, & Huici, 2009). For instance, Spanish individuals who were fused with Spain, relative to those who were not, were more willing to act violently against others who were seen as threatening another Spaniard or insulting Spain, and also willing to sacrifice their own lives if it would save the life of another Spaniard. Similarly, Moroccan individuals fused with a close group of friends were willing to kill and sacrifice themselves in an effort to defend Sharia law (Atran et al., 2014).

Conclusion

In the preceding pages, we elaborated on three intertwined factors—needs, narratives, and networks—that are the theoretically viable and empirically supported components of radicalization. We emphasized the individual motivation that drives radical action, namely, the quest for significance, and the various mechanisms (i.e., uncertainty reduction, collectivistic shift, defense of sacred values) that make extremism likely once the quest for significance has been triggered. We also located this motivation within the complex social reality of group dynamics and culture. The present model thus recognizes that an individual's initial decision to pursue radical means is partially determined by a social network that introduces him or her to, and socially validates, a specific violence-justifying narrative. And, after joining the organization, the likelihood that the individual enacts extreme behavior is increased simply by the fact that many terror cells operate as small, like-minded, family-like groups. As we continue to learn about the radicalization process, we envision that one day these very factors can be co-opted to undo the process and provide a way out of radicalism. For that to happen, theoretical ideas concerning radicalization and its possible reversal would need to be translated into concrete, context-specific practices in various domains and venues (e.g., detention centers for violent extremists, schools, communities, etc.). Thus, a great deal of work remains to be done before effective counter- and de-radicalization procedures can be proposed. However, understanding what radicalization is and the psychology that underlies it constitutes an indispensable first step on that road.

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What Makes Them Do It?
Individual-Level Indicators
of Extremist Outcomes

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Introduction

After the September 11, 2001, attacks, the global security and counterterrorism apparatus dramatically reoriented toward a pursuit of al-Qaeda and other transnational terrorist groups. Since then, there has been growing recognition that terrorist threats can manifest in the form of an independent actor and without the assistance of a foreign or domestic extremist organization. Deterring or interdicting such individuals is arguably now the main focus of Western domestic counterterrorism efforts. The urgent policy need to better understand individual radicalization has been accompanied by a massive increase in the theoretical and empirical literature examining how and why individuals turn to ideologically motivated violence.

Many influential theories of radicalization have already been rejected by scholars as being too simplistic or incomplete, including macro-political root causes[1] and psychopathological or archetypal personality explanations.[2] To replace these, scholars have proposed more nuanced theories, which are often hybrids of the older, more simplistic explanations.[3] Although the understanding of radicalization has vastly improved as a result, several major gaps and disagreements remain.

Perhaps most challenging for a rigorous academic investigation of terrorism and radicalization is that there is no common agreement on definitions for either phenomena. There are multiple, sometimes competing, definitions for the term "radicalization" (Veldhuis & Staun, 2009). One of the most often cited definitions is McCauley and Moskalenko's: "a change in beliefs, feelings, and behaviors in directions that increasingly justify intergroup violence and demand sacrifice in defense of the in-group" (2008). Given this, while it is important to preserve the practical focus on how radicalization leads to violent behaviors, it is also important to examine the processes that lead one to espouse violence-justifying beliefs.

There is growing consensus that radicalization constitutes a multifinite and equifinite process (Borum, 2011); that is, there are multiple potential outcomes as well as multiple pathways to any given outcome. As such, identifying which factors and mechanisms will lead to violent outcomes is highly complex, and much work remains to map the many

potential variations. What is more, these factors and mechanisms can begin to explain *how* one radicalizes, but not *whether* one ultimately will.

Given these gaps and the complex processes underlying radicalization, offering definitive "predictors" of who may conduct terrorist acts is not currently possible. This chapter demonstrates, however, that there are identifiable patterns that can help inform a more risk-based approach to countering violent extremism. First among these is that radicalization is generally a highly social phenomenon that does not occur in a vacuum, which means there are opportunities for observation and interdiction.

Radicalization Outcomes and Processes

While security and counterterrorism research has historically concentrated on individuals who had a direct role in perpetrating or attempting acts of ideologically motivated violence (i.e., the attacker), there have been recent efforts to better understand the variety of roles that individuals can play in the production of political violence and the processes by which they come to play those roles.

This has led to the nebulous categorization of the word "extremist," and much like the words "terrorism" and "radicalization," there is no consistent agreement on the term. For the purposes of this chapter, an *extremist* is anyone adhering to *or* participating in activities that advance an extreme ideology that justifies or demands the personal use of violence to achieve its aims. With this definition, one need not personally engage in violence, incite others to violence, or even break any laws to be considered an extremist; one need only embrace an extreme ideology, in part or in full. However, it is useful to also classify this broad range of actors into behavioral sub-types (e.g., "violent extremist") to evaluate the variety of potential extremist outcomes, with an emphasis on the distinction between beliefs and behaviors and the socialization processes that lead to them.

Radicalization Outcomes

One of the key findings from post-9/11 scholarship is that terrorist groups' members fill a variety of roles beyond producing violence, and these roles require and attract individuals with different attributes and interests.

A 2002 RAND study on counterterrorism strategies against al-Qaeda was instrumental in changing the prevailing thinking about terrorist groups, emphasizing the need for tailored strategies aimed at influencing a variety of group member roles, including leaders, lieutenants, financiers, external suppliers, logisticians, foot soldiers, recruiters, supporting population, and religious or ideological leaders (Davis & Jenkins, pp. xi, 15). While not the specific focus of their study, RAND's exploration of the functions and interests associated with each member role, as well as how an external actor might influence them, provided a valuable stepping stone for improving the understanding of the many radicalization outcomes.

Subsequent scholarship has expanded upon this to explore the relationship between members and their roles. Taylor and Horgan (2006, p. 596) identify 11 ways an individual could be involved with a terrorist group or attack, ranging from passive support to violent actor. They highlight that "some kinds of terrorist involvement may have different factors associated with them" (p. 597), but also that multiple roles can be held at the same time, and

that roles often change over time. The temporal and sequential aspects of these roles naturally complicate the analysis.

Given the range of radicalization outcomes between passive and active support, it is important to highlight the difference between extremist beliefs and behaviors. For decades, social psychology research has shown only weak connections between extreme attitudes and extreme behaviors (Jones & Harris, 1967; Sabini, 1995; Horgan, 2005). More recent survey and experimental research has consistently found significant wells of support for radical ideologies and extremist violence across the political spectrum, although few people actually engage in such behaviors (McCauley & Moskalenko, 2011, 2014; Lemieux & Asal, 2010). Likewise, there are numerous examples of individuals who have attempted to legitimize violence with a weakly embraced extremist ideology (Borowitz, 2005). This beliefs–behavior differentiation is even more pronounced within the study of how individuals leave extremism, which has found that interventions are generally more successful at changing subjects' behavior than their beliefs (Bjørgo & Horgan, 2009; Horgan & Braddock, 2010).

Radicalization Processes

Considerable work has been done to map the processes by which individuals engage in political violence or join extremist groups. There has been debate over aspects of the radicalization process, particularly the linearity of progression and whether there are discernable stages along the journey. Nevertheless, a number of the potential paths by which individuals radicalize have been outlined.[4] Process theories highlight that extremists do not arise spontaneously and arbitrarily but rather are a product of specific contexts and inputs. There is often a base of support for a terrorist organization's political agenda (or portions thereof) in the local and virtual communities from which extremists emerge, and it is through interacting with extremist ideas and actors that an individual's beliefs and/or behaviors may become more radical.

Given this interplay between the individual and the context they inhabit, most process theories cut across different levels of analysis. Moreover, they accept that there may be different factors influencing how and why the individual becomes open to participation in terrorism, the decision to commit specific acts of terrorism, and the range of potential steps in between (Horgan, 2005). While these characteristics make it possible for process theories to provide rich explanations, they also complicate efforts to empirically validate them.

Early work on radicalization attempted to produce a linear model that described both the individuals who end up as violent extremists and the larger numbers of less virulent supporters. The first major attempt to apply this understanding to Islamist radicalization in Western countries was the New York Police Department (NYPD) report titled *Radicalization in the West: The homegrown threat* (2007). The NYPD report and a European study released shortly after argue that radicalization should be conceptualized as a multi-stage, sequential, non-linear process consisting of four stages: pre-radicalization, self-identification, indoctrination, and jihadization (Precht, 2007; Silber & Bhatt, 2007).

According to this process theory, the pre-radicalized individual begins to explore an ideology (pre-radicalization) and associating with like-minded individuals (self-identification). Through the intense ideological and social atmosphere of this association (indoctrination), the individual's beliefs progressively intensify to the point that they accept the legitimacy of a violent cause and ultimately internalize the ideological norms that impose a personal duty

to engage in violence (jihadization). Some individuals may spend more time at certain stages than others, or skip them completely. Thus, there is a discernable order to these stages, but the trajectory through them is fluid and non-linear.

Subsequent process-oriented approaches have attempted to integrate the sequential perspective with a deeper understanding of radicalization's equifinality. For example, Wiktorowicz (2004, 2005) offers a model that captures the complex interaction between various levels of analysis but primarily focuses on the influence of social movements. In this model, the individual experiences a crisis (i.e., a "cognitive opening") that causes them to question long-held beliefs and turn to extremist ideologies to fill the void. Equally necessary is the presence of radicals within their social network who help guide them toward a particular ideology. These peers may even cause the cognitive opening by reframing the individual's personal or collective experiences in a way that resonates and persuades.

An alternative process-oriented approach eschews temporality to focus on "dimensions of radicalization." Proponents of this approach argue that imposition of an artificial understanding of time is inappropriate because radicalization is the result of multiple causal pathways. One prominent formulation of this approach is Sageman's (2007) four dimensions: moral outrage, interpretation, personal resonance, and network mobilization. An individual's radical behavior is the result of a complex interaction between their sense of moral outrage over a given circumstance, the depth to which they have integrated the ideology's interpretive lens into their personal perspective, their own relevant experiences, and the social network of which they are a part.

Finally, the criminological life-course perspective, which researchers have only recently begun to apply to radicalization, suggests an individual-level process that is fully embedded in the social and temporal context. Individuals are not passive but instead make purposeful choices within the structure of the specific worlds they inhabit (Laub & Sampson, 2003, pp. 54–55). The range of choices that any particular individual confronts is variable and often constrained by his or her environment. Thus, while some may hold violent ideological beliefs, they may have only limited outlets for violent behavior; others may hold generally non-violent belief systems but have mostly violent behavioral choices open to them.

One of the pioneering life-course radicalization studies demonstrates the salient influence of turning points and macro-level political developments on prison radicalization (Hamm, 2011). The life events that influenced the radicalization process were not limited to the period of confinement but include a range of experiences across the individual's lifetime. Hamm argues that the application of a life-course lens may help criminologists "understand how people evolve into terrorists" (2011, p. 188).

While changes in belief and behavior are the result of a process or a combination of processes, the pathway into extremism need not be linear or even monotonic. Given the rarity of violent extremist outcomes, it appears to require unique constellations of individual and contextual factors that shape the speed, trajectory, and final outcomes of radicalization.

Empirical Analysis of Radicalization

The study of radicalization has produced a rich corpus of theory, much of which was built and tested primarily on small samples of individuals who engaged in violent extremism. As the field has matured, these theories have increasingly been tested using larger samples, some of which also include variation on the radicalization outcomes (see, e.g., Gartenstein-Ross &

Table 3.1 Extremist Outcomes by Ideology

Ideology	Behavioral Outcome			Total
	Non-criminal	*Non-violent Criminal*	*Violent*	*Total*
Far Left	22	83	209	314
Far Right	40	197	400	637
Islamist	1	100	125	226
Single issue	18	101	183	302
Hybrid	1	8	15	24
Total	**82**	**489**	**932**	**1,503**

Grossman, 2009; Bartlett, Birdwell, & King, 2010; Rosenau, Espach, Ortiz, & Herrera, 2014; Gruenewald, Chermak, & Freilich, 2013; Gill, Horgan, & Deckert, 2014). This empirical evaluation has largely confirmed the equifinality of radicalization and identified common patterns in it.

Presented here is a high-level assessment of individuals' extremist beliefs and behaviors and the complexity of the socialization processes that lead to extremism. The analysis uses the largest open-source database on domestic radicalization, the National Institute of Justice-sponsored *Profiles of Individual Radicalization in the United States* (PIRUS) from the National Consortium for the Study of Terrorism and Responses to Terrorism (START).[5] PIRUS examines 148 demographic and radicalization process variables for more than 1,500 extremists of various types across the ideological spectrum. Thus, in addition to providing insights into the general phenomenon of radicalization, PIRUS makes it possible to begin exploring potential differences across ideologies.

Individuals in PIRUS radicalized within the United States and also met at least one of the following criteria: they were arrested, indicted, or killed as a result of ideologically moti-vated activities; or belonged to a group that was either formally designated a terrorist orga-nization or had a leader indicted for ideologically motivated violence. PIRUS does not currently cover the universe of known cases: the 1,503 cases were randomly selected for full-set coding from a much larger list of individuals who met these inclusion criteria. As Table 3.1 demonstrates, PIRUS includes a wide variety of behavioral outcomes and ideolo-gies, albeit with a heavier representation of violent extremists and those extremists who are part of the Far Right ideological milieu.

Given the granularity of PIRUS variables and reliance on open-source information, many of these fields are missing data. There is likely a reporting bias underlying this missing data issue for a number of these variables, because sources often report their absence only if it serves to bolster some other narrative about why or how the individual radicalized. Despite this probable bias, it is important to highlight that absence of evidence is not necessarily evidence of absence. The assessments in the following text generally use both data consisting of knowns and unknowns imputed to their most likely value.

Unless otherwise noted, significance tests were conducted using Pearson chi-squares. For some of these analyses, the missing data, potential ordinality of the measures, and large number of categories combine to create contingency tables with expected counts of less than five, which makes the Pearson's chi-square test less appropriate. Of particular concern is the sparseness of cases with combinations of relatively low extremist beliefs and behaviors, which may be largely an artifact of the open-source data collection process.

The PIRUS data are cross-sectional, and one must be cautious not to overstate the causal significance or direction of the correlations in the following text. As such, one cannot determine whether increases in extremist beliefs led to increases in extremist behaviors (including social networking), vice versa, or were caused by some other process.

Beliefs and Behaviors

This analysis uses PIRUS's ordinal measures of the strength of radical beliefs and a variety of different behaviors. The six-point belief scale ranges from co-travelers with no evidence of belief in an extremist ideology to deep commitment to the ideology. PIRUS includes two 11-point behavioral scales: the extremist behavior scale ranges from none through active participation in activity intended to produce casualties (Table 3.2); and the criminal severity scale ranges from non-criminal through violence against people or assault with a deadly weapon (Table 3.3). These two scales were condensed into a single three-point metric that focuses on the thresholds of criminality and violence (Table 3.4). The relationships between beliefs and behaviors are highly correlated but far from uniform across the different measures.[6]

Most individuals in this study are deeply committed or violent, and the largest plurality of specific criminal behaviors is violence intended to cause casualties. Moreover, a large proportion of each sample are at the maximum level for both beliefs and behaviors: 512 (37%) for extremist behaviors, 295 (21.4%) for criminal severity, and 576 (41.6%) for thresholds.

However, the link between levels of belief and behavior is complex. Most of the individuals whose extremist behaviors are limited to associating with known extremists have minimal exposure to the ideology (70.6% of 34), but most of the individuals who have minimal exposure to the ideology cross the threshold into violence (58.3% of 187). Indeed, more than half at each level of belief seek training or engage in violence.

Table 3.2 Maximum Extremist Beliefs and Behaviors

Extremist Behaviors	Extremist Beliefs						
	Co-travelling	Exposure	Pursuit	Full Knowledge	Shares Many	Deep Commitment	Total
None	2	1	2	0	0	0	5
Association	6	15	2	1	4	1	29
Lifestyle adoption	1	1	0	0	2	6	10
Proselytization	0	1	0	2	4	10	17
Non-extremist distancing	0	0	0	1	1	0	2
Legal activism	0	7	1	8	22	62	100
Material support	1	26	3	7	18	20	75
Logistical support	0	11	2	9	20	33	75
Training seeking	1	5	6	7	10	43	72
Operations (non-casualty)	1	25	7	14	58	173	278
Operations (casualty)	9	74	21	22	81	512	719
Total	**21**	**166**	**44**	**71**	**220**	**860**	**1,382**

Table 3.3 Extremist Beliefs and Criminal Severity

| | Extremist Beliefs | | | | | | |
Criminal Severity	Co-travelling	Exposure	Pursuit	Full Knowledge	Shares Many	Deep Commitment	Total
Non-criminal	1	5	2	3	16	44	71
False statement	2	3	1	1	2	10	19
Illegal protest	2	10	0	4	18	66	100
White-collar	1	10	1	6	14	33	65
Incitement	0	2	1	2	3	28	36
Training	4	34	15	12	44	89	198
Threat (misdemeanor)	0	3	1	2	5	10	21
Violent conspiracy	3	20	5	10	32	151	221
Threat (felony)	0	1	0	2	5	32	40
Violence (property)	2	17	6	14	22	97	158
Violence (person)	6	61	12	16	57	295	447
Total	**21**	**166**	**44**	**72**	**218**	**855**	**1,376**

Table 3.4 Extremist Beliefs and Behavioral Outcome Thresholds

| | Extremist Beliefs | | | | | | |
Extremist Thresholds	Co-travelling	Exposure	Pursuit	Full Knowledge	Shares Many	Deep Commitment	Total
Non-criminal	1	5	2	3	16	45	72
Criminal	9	64	19	27	88	240	447
Violent	11	99	23	42	116	576	867
Total	**21**	**168**	**44**	**72**	**220**	**861**	**1,386**

Interesting differences emerge when the specific criminal activities are broken apart ($p \leq 0.001$): those who are merely exposed to an ideology, as well as deep believers, are disproportionately more likely to attack people than the other levels of belief (36.7% and 34.5%, respectively, compared with a range of 22.2%–28.6%).[7] Those with full knowledge of an ideology are more likely to commit violence against property. Lastly, when one examines the thresholds, deep believers are disproportionately less likely to be criminals and disproportionately more likely to be violent ($p < 0.01$).[8]

Meanwhile, 68.1% of the 1,069 individuals who train or engage in violent operations are deeply committed, as are 66.4% of the 867 who cross the violence threshold. In other words, nearly a third of violent extremists lack a deep ideological commitment; indeed, approximately one in seven are at most pursuing additional information.

Potential differences in the relationship between beliefs and behaviors can also be examined across ideologies. The sample size and large number of potential combinations limit confidence in statistical analyses, especially given the small numbers in the hybrid category and at the bottom of the beliefs and behaviors scales.[9] Nevertheless, with the possible exception of Hybrid, all five categories appear to have higher numbers of violent extremists with maximum beliefs than would be expected.

However, the belief levels that are correspondingly underrepresented for violent extremists vary considerably: Far Right (and, to a lesser extent, Far Left and Single Issue) have notably fewer who share many of the tenets or have full knowledge; Islamist have far fewer in each category below sharing many beliefs, but this is especially pronounced for those with just exposure. The relationship between criminal severity and beliefs across ideologies is generally similar with a few exceptions for the Far Right and Islamist samples. There are fewer fully committed Islamist white-collar criminals or training-seekers than expected but more who use violence against people. There are more fully committed Right Wing extremists than expected who engage in incitement to violence, violent conspiracy, and felonious threats, and more belief-sharers who seek training. On the opposite end of the belief spectrum, fewer than expected of those with mere exposure commit violence against property while more commit violence against people. The collapsed behavioral scale highlights that Far Right and Islamist have fewer fully committed criminals and more fully committed violent extremists than expected.

Network Composition

This portion of the analysis uses a number of PIRUS variables on the structure and content of subjects' social networks. PIRUS includes variables on whether the individual was part of an informal or formal extremist group and/or a clique. In addition, PIRUS notes the most extreme radicalization outcomes for individuals' family, close friends, and romantic partners.

Of the 886 individuals for whom clique membership is known, 491 were in a clique (55.4% of the known cases, 32.7% of all cases). Of the 1,480 individuals for whom group membership status is known, 221 acted alone, 337 were part of an informal extremist group, 828 were members of a formal extremist organization, and 94 were part of an aboveground political movement or group. In other words, 78.7% of this sample were part of some kind of extremist group.

Moreover, Table 3.5 highlights a strong correlation between the maximum behavioral outcomes of individuals and their close social networks, irrespective of how that network is defined ($p < 0.01$).[10] More than half of all known cases resulted in the individual engaging in the same maximum level of extremist behaviors as someone else in their network. Although familial and romantic relationships exhibit a strong correlation for behavioral outcomes, friendships are much more likely to yield radical behaviors. Even if one assumes that absence of evidence of a radicalized network means it was not there, at least one-third of PIRUS individuals ended up engaging in the same extremist behaviors as at least one other person in their close social networks. In contrast, only 77 extremists (5.1%) are known to have lacked a connection to other extremists.

Table 3.5   Co-occurrence Between Individuals and Their Social Networks of Behavioral Outcomes

Type of Network	Same Outcome	Observed	Percentage Observed	Percentage All
Friend	420	708	59.3%	27.9%
Family	94	302	31.1%	6.3%
Romantic partner	107	325	32.9%	7.1%
Any	503	898	56.0%	33.5%

While most known cases radicalized to the same behavioral outcomes as their networks, the remainder were skewed toward greater violence. Of the 898 known cases, 130 (14.5%) engaged in less radical behaviors than their networks, and 265 (29.5%) engaged in more radical behaviors. The 580 violent extremists with known networks were connected to other radicals in all but 63 cases (10.9%); this included 75 (12.9%) and 73 (12.6%) cases, respectively, with connections to non-criminal and criminal extremists, and 369 (63.6%) with connections to other violent extremists.

The 275 criminal extremists were connected to other radicals in all but 12 cases (4.4%): 120 (43.6%) had links to other criminals; 103 (37.5%) had links to violent extremists; and 40 (14.5%) had links to only non-criminal extremists. Of the 43 non-criminals, 22 (51.2%) had links to violent extremists, five (11.6%) had links to criminal extremists, 14 (32.6%) had links to other non-criminal radicals, and the remaining two (4.7%) had no radical ties at all.

Radicalization to violence is particularly complex. On one hand, individuals who were either members of a clique or those with violent extremists in their close social network are marginally more likely to engage in violence ($p < 0.001$). On the other hand, violent outcomes are often linked to the lack of a radical social network. The extremists who were not identified as part of any radical group are more violent than would be expected, while members of aboveground radical movements or groups are much less violent than expected ($p < 0.001$). Likewise, 63 of the 77 individuals with no known radicals in their networks were violent extremists.

One compelling finding is that the relationship between an individual's behavioral outcomes and their social network is largely consistent across ideologies. As Table 3.6 demonstrates, most known cases for each ideology share the same outcome as their social networks. Although these differences are only marginally significant ($p < 0.1$), there are indicators that the socialization processes within different ideological milieus may vary in meaningful ways: Far Left individuals appear to conform with their networks more than would be expected; Far Right appear to become less extremist than their networks; Islamist appear to become slightly more extremist than their networks; and Single Issue and Hybrid have no discernible deviations from a random distribution.

Results for the Islamist subset are particularly intriguing. First, it includes proportionally fewer violent extremists than the other ideological categories ($p < 0.001$). Consequently, there are fewer individuals at the top of the behavioral scale for whom it would be impossible to radicalize to a lesser extent than their networks. One would therefore expect to see a greater representation of Islamists who radicalized to the same or lesser behavioral outcomes.

Second, the Islamist sample has a relatively high number of individuals who radicalized as part of a clique ($p < 0.001$): for known cases, 31.6% of Islamists radicalized in cliques

Table 3.6   Extremist Socialization Outcomes by Ideology

Ideology	Comparison of Self to Network Behavioral Outcome			
	Less	Equal	Greater	Total
Far Left	22	136	56	214
Far Right	63	201	108	372
Islamist	17	73	55	145
Single Issue	26	85	42	153
Hybrid	2	8	4	14
Total	**130**	**503**	**265**	**898**

compared with a range of 5.1%–17.3% for the other ideologies (for all cases, 21.7%, compared with a range between 2% and 7%). Similarly, there are higher rates of Islamists being in a clique at some point prior to exposure: 65.2% of known cases and 51.3% of all cases. Thus, one would expect these individuals to share their network's behavioral outcomes to a greater degree than other ideologies.

However, both of these appear to be overridden by the fact that the Islamist extremists' networks in this study are much less likely to include violent extremists than other milieus ($p < 0.001$): 36.6% compared with a range of 57.1%–59.8% for other ideologies. These findings suggest that, within the Islamist social movement, violent extremists are less connected with each other than in non-Islamist groups. Thus, socialization processes might vary in critical ways from other extremist movements.

Network Relationships

It is revealing to examine the type of relationships extremists had with their networks. PIRUS provides three ways to investigate this, though none fully captures the phenomenon: (1) PIRUS codes for whether the individual is generally sociable or a loner; (2) it evaluates the degree to which individuals have trouble building and maintaining friendships; and (3) it directly codes the closeness of the relationship between the individual and his or her family.

Of the 774 individuals assessed for sociability, 140 (18.1% of known, 9.3% of all cases) were loners. Although there were slightly more violent and slightly fewer criminal loners than expected, these differences were not statistically significant. What is marginally significant ($p < 0.1$) for the 538 for whom both attributes were measured is that being a loner reduces the extent to which individuals conform with their social network.[11] While 54.4% of the 437 sociable extremists conform (or 57.1% of the 797, if one assumes no information found indicates the individual was not a loner), 47.5% of the 101 loners do as well. Nearly all of this difference was because loners were more likely to be more extremist than their networks (43.6% compared with 31.6% of known or 27.7% of known and assumed). Finally, there is no discernible difference in the prevalence of being a loner across ideology, nor in its effects on behavioral outcomes.

Of the 410 individuals for whom there is clear evidence of the ability to build and maintain non-romantic friendships, only 49 were assessed to have difficulty in this regard (12.0%). There is a correlation between friendship difficulty and an increase in violent behavioral outcomes: 85.7% compared with 57.3% ($p < 0.001$). Likewise, for the 348 for whom both attributes are measured, platonic troubles nearly double the probability that an individual will radicalize more than their social network: 59.4% compared with 33.2% ($p < 0.05$).[12] One of the major drivers of this outcome is that two-fifths (40.6%) of the 32 relationship-troubled individuals were not connected with any radical networks, so any radical outcome is inherently greater than their social networks'.

There is no discernible relationship between the prevalence of platonic troubles and ideology; moreover, its effect on outcomes appears fairly consistent across ideologies. Interestingly, the overall finding of strong statistical significance appears most heavily driven by Islamism ($p < 0.01$).[13] While each of the ideologies had more violent extremists with platonic troubles than would be expected, all nine Islamists with known difficulty in maintaining friendships were violent.

Finally, PIRUS provides a measure of subjects' familial closeness for 294 individuals, of whom only 58 (19.7%) were assessed to have distant relationships. This barely had a significant relationship with behavioral outcomes ($p < 0.05$).[14] When combined with familial behavioral outcomes, this sample is reduced to 163, but there appears to be a strong relationship between them ($p < 0.001$). This relationship appears to be driven by the extreme outcomes for familial networks: 23 out of 28 (82.1%) with distant relationships have non-radical families, while 81 of the 135 (60%) with close familial relationships have some kind of radical families. Of the 40 extremists who have family members who are violent, only one is not close with their family. Interestingly, that instance is also violent, whereas 11 of the 39 with close violent family members are non-violent. Thus, it appears familial closeness is a poor indicator of behavioral outcomes.

Conclusions

This analysis underscores the multifinality and equifinalities of radicalization identified in previous studies. It demonstrates the complexity of the relationship between beliefs and behaviors and highlights the generally social nature of the processes that lead to extremism. It also provides a foundation for assessing the limits for generalizing contextual theories to the broader phenomenon. However, while PIRUS provides the largest current data collection on individual radicalization, one must be cautious in drawing conclusions. Considerable work remains to collect additional data and fully explore the radicalization processes and outcomes.

Because PIRUS is based on open sources, it has a large quantity of missing data, and both the missing and present data likely reflect biases in these sources. Similarly, there are insufficient data available to assess how representative the PIRUS sample is of the universe of domestic extremists, but it is likely that the skew toward violent extremists is once again reflective of open-source reporting biases. In particular, the relatively small numbers of lower-belief and/or lower-behavior extremists limit inferential power, especially as one attempts to examine the differences within data subsets (e.g., across ideology). Last, because the data are cross-sectional, temporality and thus causality are difficult to assess. Ideally, future studies will ascertain the true distribution(s) within the universe of cases, and PIRUS data will be expanded to make it more representative and enable more robust analyses.

While the prospect of a "grand theory" of radicalization seems unlikely, the systematic application of universal concepts and metrics makes it possible to continue developing meaningful and useful contextual theories. The relatively low (albeit significant) correlation between extremist beliefs and observable behaviors confirms earlier findings about the weakness of these linkages (McCauley & Moskalenko, 2014). The wide assortment of different criminal activities in which PIRUS extremists engaged and their limited relationship to extremist beliefs reinforce the need for continued refinement of the definition of extremist outcomes. This, combined with more data on the temporality of changes in beliefs and outcomes, would advance the field enormously.

The strong finding of the importance of close social network relationships emphasizes the importance of socialization within the radicalization process. This supports the earlier finding that radicalization is a "social epidemic;" that is, one's outcomes are largely defined by the outcomes of one's friends (Bartlett et al., 2010). In addition, this study highlights that friendships generally have a much higher relative prevalence of co-radicalization compared

with familial or romantic relationships. Although PIRUS only assesses the closeness of relationships for family networks, it suggests support for a more generalized finding: distancing from non-extremist relationships may be an important part of radicalization to violence, but close relationships with violent extremists is not a definitive indicator of an individual's own violent behaviors.

Yet, the fact that nearly one-fifth of PIRUS cases were not part of an extremist group and that roughly 8% of observed cases had no close connections to other extremists highlight the limitations of focusing too narrowly on social processes. Moreover, both of these subsets were more likely to be violent. This suggests that there are likely at least two significantly different causal mechanisms at play, requiring more systematic study of the differences between these two groups (Michael, 2012; LaFree, 2013; Simon, 2013; Gill et al., 2014; Spaaij & Hamm, 2015; McCauley & Moskalenko, 2014).

Notes

1   There have been many studies that identified conflict, poverty, modernization, and a host of other conditions that lead to violence (Ross, 1993; Krueger, 2007; Piazza, 2006; Silke, 2008). Root-cause explanations for Islamist terrorism, in particular, argue that individuals radicalize because of socio-historical forces, such as globalization, leading to marginalization and social exclusion (e.g., Nesser, 2004; Keppel, 2004). However, none of these studies explains why only a small fraction of the population exposed to these factors translates grievances into violence.

2   For early psychological work on explaining terrorism, see Borum, 2004; Horgan, 2005; Post, 2005; and Victoroff & Kruglanski, 2009.

3   Crossett and Spitaletta's (2010) summation of 16 theories, 12 mechanisms, and 16 risk factors highlights the deficiency of using any one of these older approaches in isolation.

4   It is important to note that many studies investigating radicalization processes have focused on Islamist extremism, leaving open the question of how applicable these findings are to other motivating ideologies.

5   While the American Terrorism Study (ATS) and Extremist Crime Database (ECDB) are larger individual-level datasets, they do not specifically evaluate radicalization mechanisms and processes.

6   In addition to the crosstab analysis in the following text, direct correlation tests suggest a notable difference in the relationship between extremist beliefs and the various measures of extremist behaviors. Whereas extremist beliefs have a significant, positive Pearson Correlation of 0.243 with extremist behaviors ($p < 0.001$), it has a less significant correlation of 0.053 ($p < 0.005$) with behavioral thresholds, and a very insignificant correlation of 0.024 with criminal severity. However, if one uses non-parametric correlation tests (i.e., Kendall's tau and Spearman's rho) to address the underlying skew in the distributions for extremist beliefs, behaviors, and behavioral thresholds, criminal severity becomes significant ($p < 0.05$) and the thresholds become very significant ($p < 0.001$).

7   The large number of categories produces a contingency table with 66 cells, 28 of which have expected counts less than five, so the Pearson's chi-square may not accurately capture the significance of potential relationships. The linear-by-linear association test was highly insignificant ($p = 0.715$), while each of the double-ordered association tests (Somer's d, Kendall's tau, Gamma and Spearman's Correlation) is only marginally significant ($p < 0.08$). These findings may signify either that the rank-order within criminal severity scale is not correctly specified, or that the relationship between the variables truly is non-linear.

8   The 18-cell contingency table has three cells with an expected count less than five, so the Pearson's chi-square must be supplemented. However, the linear-by-linear analysis is also significant ($p < 0.05$), and double-ordered association analyses are all highly significant ($p < 0.01$).

9   For extremist behaviors, all contingency table analyses are highly significant ($p < 0.01$) for each ideological category except for Hybrid's, none of which was significant. For criminal severity, Far Right and Islamist chi-squares were both marginally significant ($p < 0.1$); Far Right had a significant likelihood ratio ($p < 0.05$); and Islamist had a significant linear-by-linear association ($p < 0.001$). However, all of the other correlation analyses found that Islamist was highly significant ($p < 0.001$), while Far Right became insignificant. The behavioral threshold scale produces significant ($p < 0.05$) Pearson and likelihood ratio results for both Far Right and Islamist, but the linear-by-linear test was highly insignificant for Far Right and highly significant for Islamist ($p < 0.001$), and the other tests were almost significant for Far Right and highly significant for Islamist ($p < 0.001$).

10   The linear-by-linear association was highly significant ($p < 0.001$) for friends but was insignificant for family and significant other, which each had three out of 12 cells with expected counts under five; it was significant for the combined metric ($p < 0.05$).

11   If one assumes that no information equates with the individual being reasonably sociable, which increases the number of observations included to 898, the significance increases considerably ($p < 0.01$).

12   One of the six cells in this table has an expected count of 4.53, so the Pearson's chi-square may be overstated. The linear-by-linear association is even more significant at $p < 0.01$. Imputing values for missing data, the Pearson's chi-square and linear-by-linear association are significant at $p \leq 0.001$ and the others at $p < 0.01$.

13   None of the other ideologies had a significant Pearson's chi-square or linear-by-linear association (there were 14 cells with an expected count below five). The double-ordered association tests are all highly significant for Islamist ($p < 0.01$) and also significant for Far Left ($p < 0.05$). For imputed values, the Pearson chi-square loses some significance ($p < 0.05$) but the linear-by-linear and double-ordered association tests remain strongly significant ($p < 0.01$) for Islamist; the double-ordinal tests (other than Spearman's) are significant for Far Left ($p < 0.05$) and marginally significant for Hybrid ($p < 0.1$).

14   One of the six cells has an expected count of 2.96, and the linear-by-linear association is marginally significant ($p < 0.1$), but all of the double-ordinal tests are significant ($p < 0.05$).

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The Terrorists' Planning Cycle: Patterns of Pre-incident Behavior

Brent L. Smith, Paxton Roberts, and Kelly R. Damphousse

Although the identification of "pre-incident indicators" of terrorism has been the "holy grail" for local law enforcement, little empirical work has been dedicated to this effort. Much of the training on pre-incident indicators to local, state, and federal law enforcement and investigators is forced to rely on anecdotal information derived from specific case histories.[1] Equally as important as merely identifying the existence of various types of pre-incident behavior is the need to "time stamp" these behaviors, so that we can begin to understand the terrorists' planning cycle. The identification of this temporal data is critical for identifying characteristics of the planning cycle used by various terrorist groups. First, one must consider that the planning cycle may vary by *incident* type. One can reasonably expect that the planning cycle for a simple arson will vary considerably from a coordinated bombing involving multiple targets. Secondly, the *ideology* of the group will determine target selection and, to some extent, the complexity of the terrorism incident. Finally, the level of complexity of an incident is probably correlated with the *number of persons* needed to carry out the incident. Although there may be a number of factors that influence the terrorists' planning cycle, these three major variables stand out: incident type, ideology or goals of the group, and the number of persons involved in the conspiracy. In the sections that follow, we will frequently return to a discussion of the influence of these three variables on the patterns of pre-incident behavior that are presented.

The "life cycle" of terrorist groups has been the focus of considerable recent research (see Sageman, 2008, and Smith & Picarelli, 2008, for a review of some of this work, and Cronin, 2006, in particular), but the utilization of terrorists' pre-cursor activities to identify pre-incident indicators has not been the primary intent of this body of literature. Although some geospatial research has examined the pre-incident conduct of terrorists, most of the work in this area has focused on the etiology of terrorism (Bahgat & Medina, 2013). Additionally, important work on desistance from terrorism has emerged in recent years (Miller, 2012). However, almost all of this research has focused upon terrorist organizations, rather than analysis of specific incidents. Other than some of our own exploratory research on this topic for the National Institute of Justice (NIJ),[2] research on the *temporal*

aspects of terrorists' precursor activities at the incident level have been extremely difficult, and, consequently, have not been widely examined.

Temporal data linked to the specific behaviors of terrorists prior to an incident hold enormous promise for law enforcement, particularly if specific types of precursor crimes follow a rational sequence of events. At the most basic level, there have been some estimates regarding the average lifespan of terrorist groups (Rapoport, 1992), but most of these estimates have been based on case studies rather than empirical data using reliable sampling techniques. A number of methodological problems probably have been responsible for the lack of reliable information not only about the life span of terrorist groups, but also about the sequencing and number of precursor events, and the length of the preparatory process for specific terrorism incidents. Terrorist groups frequently change their names for specific actions, occasionally coalesce with other groups and then disperse again, and even disband only to emerge again with different personnel. This amoeba-like quality makes the study of terrorist groups not only challenging but also increases the probability that estimates regarding the life course of terrorist groups or the sequencing of behaviors leading to specific terrorist incidents will be limited to individual case studies, or, worse yet, completely unreliable (See Freilich, Chermak, & Caspi, 2009, for a summary of some of these methodological problems).

Types of Pre-incident Behaviors

An examination of the terrorists' planning cycle requires that we have some understanding and measurement of the behaviors that would be included as "preparatory" to a terrorist incident. For the current analysis, we use data from the American Terrorism Study (ATS), which is based on information extracted from federal court cases involving persons indicted for "terrorism or terrorism-related" activities due to an FBI investigation under its counter-terrorism program (Smith, 2006). The ATS includes data on individuals indicted from 1980 to the present. Since 2003, the NIJ has funded five projects[3] specifically intended to identify "precursor" or "pre-incident" activities committed by terrorists prior to "officially designated" terrorism incidents. The DHS START Center of Excellence has provided funding for additional data collection on these cases since 2008.[4] This chapter provides a summary of findings from all of these projects. This analysis involved examining the pre-incident activities of terrorists linked to 409 planned or completed terrorism incidents between 1975 and 2011 that fell into four categories—al-Qaeda or al-Qaeda-related, Far Left, Far Right, and environmental groups. Incidents where ideological affiliations were categorized as national/separatist (43), single-issue (28), or not known (7) were eliminated from this analysis.

We identified 2,559 *antecedent* activities[5] associated with the 409 planned or completed incidents. Antecedent activities simply refer to any behaviors noted in federal court documents that may have been relevant to the case. These antecedent activities are further divided into whether they were *ancillary* or *preparatory*. Preparatory behaviors are those that were directly linked to either planning or preparing for a specific terrorist incident. There had to be specific evidence in the court records to indicate that the activity involved planning or preparation before it was recorded as such. All other behaviors were considered ancillary. For example, for a meeting to be classified as preparatory, the court records must mention that the meeting was for the specific purpose of planning or preparing for the linked incident. Otherwise, the meeting was simply classified as ancillary. The ancillary classification is the default—without specific information that the recorded behavior was

Table 4.1   Prevalent Antecedent Activities

Category	Number of ancillary	Number of preparatory	Total antecedent
Meetings	137	394	531
Communications	89	322	411
Travel	152	216	368
Acquire bombs/weapons	16	166	182
Surveillance/reconnaissance	15	125	140
Fraud	18	118	136
Procure money/equipment	36	96	132
Training weapons/tactics	36	81	117
Violent acts	26	44	70
Manufacturing weapons/bombs	2	49	51
Transport weapons/wombs	8	40	48
Establish residence/business	25	15	40
Other	121	212	333
Total	681	1,878	2,559

related to the planning or preparation for the terrorist incident, the behavior was coded as ancillary. Nearly three-fourths (73%—1,878 of 2,559) of the pre-incident activities identified were recorded as preparatory in nature. The remaining 27% ($n = 681$) were considered ancillary. Table 4.1 provides a summary of the predominant types of these activities.

"Meetings" accounted for approximately 21% of the pre-incident activities recorded, while "communications" (phone calls, emails, etc.) accounted for another 16% of these behaviors. Travel recorded as part of the planning and preparation process or deployment of an explosive or incendiary device accounted for an additional 14% of the total volume of known, pre-incident activities. These three types of activities constituted one-half of the recorded precursor conduct of the terrorists in the sample. Most of these behaviors would not be explicitly criminal unless they had been identified as overt acts of conspiracies in the indictments. Consequently, few of these behaviors would have been likely to attract the attention of law enforcement personnel. Most of the remaining half of these precursor acts, however, did involve explicitly criminal conduct—conducting surveillance, fraud, acquiring bombs or bomb-making materials, and manufacturing explosive devices were all recorded at least 50 times each. Efforts to acquire bomb-making materials or weapons headed this list of overtly observable criminal activities.

We suggested earlier that the length of the terrorists' planning cycle and the number of pre-incident activities varies by group type or ideology. This is primarily due to the notion that differences in the ideological goals of terrorist groups determines the type of target as well as the necessary sophistication of an incident to strike the desired target (Smith, Damphousse, & Roberts, 2006). To examine this issue, we divided the precursor behaviors based on whether they were committed by al-Qaeda or al-Qaeda-related, Far Left, Far Right, or environmental groups. The results of this analysis are presented in Table 4.2.

Of the 409 incidents studied, Far Right terrorists were responsible for the greatest number (134, 32.8%). Somewhat surprisingly, environmental groups were responsible for the second largest number of incidents, accounting for nearly one-fourth of the total number of terrorism incidents (96, 23.4%). Relative newcomers to American terrorism,

Table 4.2 Number of Antecedent Activities and Antecedent Activities Per Incident by Category of Terrorism

Category	Incidents	Ancillary Acts	Ancillary Acts Per Incident	Preparatory Acts	Preparatory Acts Per Incident	Antecedent Acts	Antecedent Acts Per Incident
AQ-related	63	194	3.08	654	10.38	848	13.46
Far Left	89	88	0.99	376	4.22	464	5.21
Far Right	134	334	2.49	540	4.03	874	6.52
Environmental	96	27	0.28	147	1.53	174	1.81
All categories (total)	409	681	1.67	1,878	4.59	2,559	6.26

Note: Ancillary and preparatory acts are subcategories of antecedent acts. Only antecedent acts that were associated with an incident are included in this table. Additional case studies have antecedent acts, but no incident could be identified for analysis. The statistics for "All categories" include other single issue, Nationalist/Separatist, and unknown categories, but are not shown individually as there were not enough data for meaningful analysis. The numbers above may not add up to 100% because of rounding error.

al-Qaeda-related affiliates were responsible for the smallest number of these incidents (63, 15.4%). However, when one examines the volume of precursor activities associated with each of these incidents, the proportions committed by the various groups change dramatically. al-Qaeda, al-Qaeda-related, and Far Right groups accounted for approximately equal numbers of the precursor behaviors recorded by terrorists in the United States for the 409 incidents studied. Together, they accounted for two-thirds of the antecedent acts recorded (33% and 34%, respectively). Incidents committed by environmental adherents were associated with the smallest number of antecedent acts ($n = 147$).

These ideological differences in planning activities are demonstrated even further by examining two columns in Table 4.2—"Preparatory Acts per Incident" and "Antecedent Acts per Incident." Incidents planned or committed by al-Qaeda-related adherents were associated with, by far, the greatest number of preparatory (10.38) and antecedent (13.46) acts per incident. Far Right and Far Left adherents were virtually identical, committing 4.03 and 4.22 preparatory acts per incident, respectively. In contrast, al-Qaeda-related adherents engaged in twice as many precursor activities per incident as either Far Left or Far Right adherents. Most notable is the minimal number of precursor activities recorded for incidents associated with environmental causes. On average, we recorded only 1.53 preparatory and 1.81 antecedent acts per incident for this category.

While we readily acknowledge that the total number of pre-incident activities recorded for these incidents is undercounted, the stark differences among these groups cannot be attributed simply to methodological bias. In contrast, we contend that these variations reflect differences in the type and sophistication of the incidents planned. Incidents planned and/or carried out by al-Qaeda-affiliated adherents have been much more sophisticated than other terrorism incidents (e.g., the 9/11 attacks). Environmental terrorists, in contrast, are noted for relatively simple acts of vandalism or arson that require little planning or preparation. The components for their improvised incendiary devices (IIDs) can be readily obtained or bought without engaging in criminal conduct, and their activities have frequently emerged following protests over specific environmental issues. Hence, their behaviors have a decidedly more spontaneous quality about them than the planning processes of other

group types (Smith & Damphousse, 2009). Where these behaviors took place and how they were distributed over the planning process are the foci of the following sections.

Spatial Patterns of Pre-incident Behavior

Terroristic endeavors, as with all human conduct, are limited by time and space (Smith & Damphousse, 2008; see also, Johnson & Braithwaite in this volume). One cannot address the planning cycle without acknowledging the impact of these two variables on this process. Spatial distances clearly affect the length of time needed to prepare and carry out terrorist attacks. Consequently, the limitation that space places upon time has a notable effect on how terrorists behave. They may choose to live close to the target or close to each other in an effort to shorten the planning process. Or they may choose to commit certain types of preparatory behaviors at great distances from their "safe houses" or the proposed target location to avoid detection by local law enforcement. These and numerous other spatial decisions may greatly affect the length of time needed to carry out a terrorism incident (Smith, Cothren, Roberts, & Damphousse, 2008).

To examine this issue, we examined the geospatially coded data associated with the 409 terrorism incidents used for this study. Incident locations were only available for 218 of the 409 planned or completed incidents. We then measured the relationships among the terrorists where they resided, where they committed precursor activities, and where the 218 incidents took place. Figure 4.1 depicts a typical method used to identify spatial patterns. In this example, the locations of the terrorism incident are superimposed at the center of the rose diagram. The locations of the residences of the terrorists are then located spatially on the diagram, providing both an azimuth (direction) and a distance.

Overall, 30% of the terrorists lived within 15 miles of the intended/actual terrorist incident location, and slightly over one-third (34%) lived within 30 miles of the incident location. Beyond that, a bimodal distribution emerged, with greater and greater percentages living farther and farther from the incident site. Once again, however, we suspected that these patterns varied by group type. Therefore, these measurements were divided into the four ideological categories, provided and examined in Table 4.3. Distinct patterns emerge from this analysis. Al-Qaeda-affiliated terrorists exhibited an extreme bimodal pattern, with over one-half of the terrorists living within 30 miles of the intended target, while another 28% lived over 811 miles from the target location. The two attacks on the World Trade Center in 1993 and 2001, both of which were affiliated with al-Qaeda-inspired terrorists, are illustrative of this pattern. In the 1993 attack, most of the perpetrators lived and worshipped in Brooklyn, NY. The attackers literally lived within sight of the Twin Towers. In the 2001 attack, the perpetrators flew hundreds of miles to arrive at the target location, using the planes as the eventual method of explosive delivery. To a lesser extent, a similar bi-modal distribution also exists for environmental and Far Right terrorists, and, to an even lesser degree, Far Left terrorists as well.

Since outliers can greatly affect the means on these measurements, median values (indicating that half of the activities occurred nearer and half of them farther than the measured variable) represent the best indicators of spatial patterns. Overall, one-half of the terrorists lived within 134 miles of the target, while the other half lived farther away. But also note the differences by group type. One half of al-Qaeda-related terrorists lived within 17 miles of the target. All other types of groups had a median of over 100 miles. Why this pattern exists is not really known. It may be due to new immigrant status, lack of knowledge of the
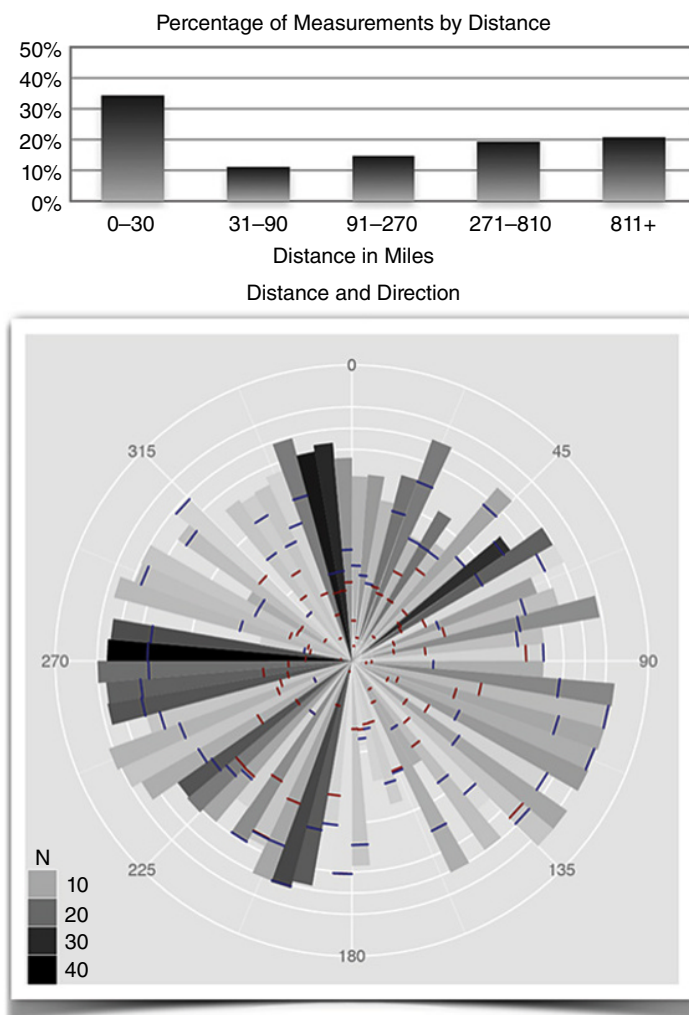
Figure 4.1 Residence to Incident Locations Distance and Direction Analysis

American landscape, a desire to conduct surveillance on a site previously unknown to the attackers, or simply limited access to transportation. Whatever the reason, these international terrorists have a distinct "local" connection to the target area. The Boston Marathon bombers continued this tradition in April 2013, living in and around the Boston area for several years before the bombing. In contrast, environmental terrorists lived, on average, significantly greater distances from the incident location than any other types of terrorists (median of 207 miles compared with 17, 110, and 128 miles for the other group types). Environmental terrorists typically come from urban backgrounds, while their misguided efforts at environmental protection have targeted Bureau of Land Management facilities and private timber operations in rural or remote communities. This difference between demographic background and target selection accounts for much of this disparity.

Table 4.3 Comparison by Category of Terrorism for Measurements from Residences to Incident Locations

	AQ-related	Environmental	Far Right	Far Left	All categories
0–30 miles	55%	25%	44%	29%	34%
31–90 miles	5%	11%	4%	16%	11%
91–270 miles	3%	19%	11%	21%	15%
271–810 miles	8%	11%	7%	34%	19%
811 + miles	28%	35%	33%	0%	21%
Median	17	207	110	128	134
Incident locations	19	72	64	61	218
Measurements	60	264	295	306	931

Note: The statistics for "All categories" include other single issue, Nationalist/Separatist, and unknown categories but are not shown individually as there were not enough data for meaningful analysis. The numbers above may not add up to 100% because of rounding error

Temporal Aspects of the Planning and Preparation Process

As noted in the previous section, distances between targets and pre-incident behavior impact the length of the planning and preparation process. The temporal dimension is one of the most difficult aspects to study, because it requires knowledge of not only when a planned incident was to occur, but also when the planning or preparatory behavior(s) occurred (Cothren, Smith, Roberts, & Damphousse, 2008). Although this information is frequently "time-stamped" in court documents, calculating the length of time between events necessitates that we have complete temporal data on both variables (date/time of the antecedent activity and date/time of the terrorism incident). Consequently, numerous occasions arise in which one, but not both, of these variables can be measured, resulting in a substantially reduced number of measurements with which to identify patterns of behavior. For example, of the 2,559 precursor behaviors identified for the current analysis, only 795 were preparatory behaviors with known dates that could be matched to a known planned or completed terrorism incident date.

These 795 activities were placed into different categories. The 17 most frequently occurring categories, representing 515 of the activities, are shown in Figure 4.2. They were then ordered in sequence relative to the median number of days from occurrence of preparatory activity to incident date. While "median number of days" is not a perfect measure, it is obvious from a visual examination of the figure that certain types of behaviors occur more frequently at different stages of the planning and preparatory cycle. For example, the issuance of a communiqué either calling for action or giving public warning of impending terrorism typically occurred well in advance of the planned incident. Unlike warnings by Leftist groups in the late 1960s that "a bomb has been placed in such and such a location and will detonate at a designated time," terrorists in more recent years have not been as obliging. Instead, the communiqués in our data were more indicative of "fatwahs" among Islamic extremists or warnings that appeared on websites or calls to action against specific targets. "Research" on possible targets and highly specific types of criminal conduct occurred early in the planning process, particularly behaviors that would support the terrorists'

Type of crime	3+ years	1–3 years	6 months to 1 year	3–6 months	1–3 months	15–30 days	8–14 days	4–7 days	2–3 days	Day before and day of incident	N	Median
Communiqué											15	1296
Research											8	555
Birth certificate fraud											8	505
Border crossing											8	434
Theft											101	293
Fraudulent passport application											12	287
Training											18	197
Fraud to allow travel											36	180.5
Procurment-purchase											30	74.5
Reconnaissance/surveillance											19	58
Meeting											81	46
Possession/storage of exposives											28	43.5
Money transfer											79	41
Manufacturing of explosives											46	9.5
Recruitment											9	6
Robbery of weapons											10	4
Deployment of explosive device											7	3
Percent of total for time period	4%	22%	14%	9%	18%	11%	5%	4%	6%	8%		

Figure 4.2 Notable Patterns of Precursor Conduct

Table 4.4 Running Cumulative Percentage of Preparatory Acts by Time Range

Category (incidents)	3+ years	1–3 years	6–12 months	1–6 months	21–31 days	11–20 days	6–10 days	2–5 days	Day before	Incident day	Total acts
Left wing (45)	100%	97%	65%	49%	16%	13%	11%	8%	3%	1%	153
Right wing (40)	100%	96%	76%	60%	32%	25%	17%	15%	7%	5%	285
International (13)	100%	97%	87%	77%	50%	43%	25%	22%	6%	5%	380
Single issue—other (11)	100%	100%	100%	100%	62%	48%	48%	32%	8%	4%	26
Environmental (38)	100%	100%	100%	97%	88%	85%	63%	54%	33%	16%	118
All categories (147)	100%	97%	82%	70%	44%	38%	26%	22%	10%	6%	962

movements—fraudulent behavior involving travel, birth certificates, passport applications, or border crossings. Thefts of material to support either the group or the operation were most prominent in the early stages of the planning cycle, which then tapered off significantly as the incident date approached. These behaviors were most likely to occur 90 days or more prior to the planned incident.

If the activities that occur early in the process do not result in the arrest or detention of the planned participants, the process moves forward in earnest, with a shift in activities in 1–3 months prior to the planned incident. Final purchases are made, and funds are transferred to either purchase explosive materials or aid in the escape of the perpetrators after the incident. Reconnaissance and surveillance of the selected target increases, and also the number of meetings increases as plans are finalized. Activities during the week prior to an incident typically involve additional money transfers, final meetings, manufacture and storage of explosive devices, and final deployment of devices. Also, somewhat oddly, robbery of weapons and final recruitment of the individuals selected to participate in the terrorism incident occurred most frequently in the latter stages of the planning and preparation cycle. These are behaviors that we expected would take place much earlier in the planning process. In some cases, these are merely anomalies; in other cases, they appear to be patterned characteristics of the behavior of particular types of terrorist groups. For example, it was not uncommon for conspirators in some environmental groups to spontaneously select additional participants for specific roles, such as "lookout" or "getaway driver," in the days or hours immediately preceding an incident (Smith & Damphousse, 2009).

In general, we were surprised to find that nearly half (44%) of all preparatory precursor conduct occurred within the last month prior to a planned or completed incident (see Table 4.4). Although some groups may plan an incident for years, the overwhelming majority (70%) of preparatory activities took place within 6 months of the incident (see Smith & Damphousse, 2009). Previously, we noted extensive *spatial* variations in antecedent activities when comparing Far Left, Far Right, al-Qaeda-related, and environmental groups. We suspected that there would also be substantial variations in these general *temporal* patterns when group types were examined separately. Most surprising is the short planning cycle associated with terrorism incidents committed by environmental terrorists. These perpetrators committed one-third of their preparatory behaviors either the day of, or the day immediately prior to, the incident. The other group types averaged committing about 5% of their behaviors during this same time frame. Furthermore, environmental terrorists committed over one-half (54%) of their preparatory behaviors within 5 days of the incident. No other group type had committed more than 22% during this same period.

Part of the reason why environmental terrorists appear to have a substantially shorter planning and preparation cycle is owing to the type of attacks they commit (Freeman, 2007; Grigoriadis, 2006; Janofsky, 2006; Jarboe, 2002). Their bombings tend to be rather simple, requiring little criminal conduct to procure the bomb-making components. Instead of explosive devices, environmental terrorists are noted for "eco-tage" ("environmental sabotage" or vandalism) and arson. Their arsons, which have predominately targeted Bureau of Land Management facilities, privately owned timber operations, and construction sites in pristine areas—such as the Vail, Colorado, ski resort arson in 1998—typically involve rather simple mixtures of soap and petroleum products to produce what has been referred to as "vegan Jell-O." A simple, timed detonator was used to ignite the main IID (improvised incendiary device). Since the components could be bought without having to steal them, fewer preparatory activities were necessary that would come to the attention of law enforcement. Since the IID was relatively volatile, instead of making the devices well in advance of an incident or incidents, most of these devices were created the day prior to the bombing and deployed the next day. Although environmental terrorism has declined in recent years, their activities serve as a reminder that *tactical* considerations frequently trump organizational structure as a primary determinant of the planning cycle.

Since both the target and tactics used by terrorists differ by group type, we conducted a crime-specific analysis to examine the specific types of precursor behaviors that were more likely to be committed by the different types of terrorists.[6] These findings are presented in Figure 4.3. For each group type, only 10 or so of the 17 categories of precursor activities figured prominently in their activities. For example, birth certificate fraud, fraud to facilitate travel, and fraudulent passport applications figured more prominently among Far Left precursor activities than other types of groups. Similarly, money transfers were unique precursor behaviors associated with al-Qaeda-related types of organizations. Meetings and manufacture of weapons or explosives were common to all types of groups.

For environmental terrorists, only 10 of the 17 precursor behavioral categories figured prominently in their activities. Other than *training*, the remaining activities all generally occurred within 1 month prior to a planned incident, and most of these occurred within the final week before the incident. Meetings, final selection of the participants (categorized here as recruitment) for commission of the incident, reconnaissance, and manufacture and deployment of the device predominantly occurred within 5–6 days of the incident.

In contrast, several of the precursor activities of Far Right adherents began much earlier. Recruitment, reconnaissance and surveillance of the target, meetings, and manufacture of weapons or explosives all occurred several weeks earlier than they occurred among environmental terrorists. Far Left and al-Qaeda-related terrorists had a substantially longer planning cycle than either environmental or Far Right terrorists. Generally, notable planning and preparatory activities for Far Left and al-Qaeda-related terrorists began about a year and a half prior to the incident. For Far Left adherents, these early activities involved thefts and procurements or purchases of weapons or bomb-making materials, research on the target, and various fraudulent activities intended to facilitate easier travel. For al-Qaeda-related terrorists, these early activities included border crossings, meetings, and training. Storage of weapons and explosives and manufacture of the explosive devices also occurred in the later stages of the planning cycle, but in terms of the actual number of days prior to the incident, these behaviors began a few weeks earlier than when environmental terrorists engaged in similar conduct.

Environmental

6 months			30 days			7 days to incident				

Training	Communiqué	Robbery of weapons	Weapons possession/ storage	Meeting	Recruitment	Border crossing	Manufacturing of weapons	Recon/ surveillance	Deployment of explosives
152.5	31	30	30	6	5	3	1	0	0

(Median days to incident)

Far Right

1 year	6 months		3 months			30 days		7 days to incident	

Recruitment	Training	Recon/ surveillance	Theft	Meeting	Weapons possession/ storage	Procurement– purchase	Manufacturing of weapons	Robbery of weapons	Deployment of explosives
237	151	124	102	50.5	33	30	19	4	0

(Median days to incident)

Far Left

3+ year		1 year			6 months	3 months		30 days	7 days to incident	

Research	Birth certificate fraud	Procurement– purchase	Theft	Fraud to allow travel	Fraudulent passport application	Weapons possession/ storage	Recon/ surveillance	Meeting	Manufacturing of weapons	Deployment of explosives
555	505	409	345	342	287	68	58	30	6	0

(Median days to incident)

AQAM

3+ year		1 year		3 months				30 days		7 days to incident	

Communiqué	Border crossing	Meeting	Training	Money transfer	Procurement– purchase	Robbery of weapons	Weapons possession/ storage	Fraud to allow travel	Manufacturing of weapons	Deployment of explosives
1296	434	260.5	197	41	39	36	28	27	17	0

(Median days to incident)

Figure 4.3   Temporal Sequencing of Major Preparatory Activities by Group Type

There are several traits common to all these groups. Training, when detected, usually occurred about 5–6 months prior to an incident. Similarly, when weapons or explosives needed to be stored or cached, these activities were routinely noted as occurring about 1 month prior to a scheduled incident. Finally, although environmental terrorists are noted for the manufacture of their IIDs immediately prior to deployment of the device, manufacture of explosive devices late in the planning and preparation cycle was a pattern characteristic of all of the group types. None of the terrorist groups prepared their devices, on average, more than 3 weeks prior to when an incident was scheduled.

Implications

One of the most important findings from our analysis is that a single terrorism incident typically involves *multiple* criminal acts (Hamm, 2007; Sageman, 2004; Nugent-Borakove, 2008; Smith, 1994). The major difference between terrorism, other than its political or social motives, and traditional criminality, such as robbery and burglary, is that terrorism usually involves considerable planning and preparatory conduct. "Street-level" crime, the focus of most research in criminology over the past century, is traditionally spontaneous and relatively devoid of planning (Reppetto, 1974; Wright & Decker, 1997). Although the perpetrators of terrorism may engage in significant criminal conduct prior to an incident, they also expend considerable time and effort in the selection of the target, and the manufacture, delivery, and deployment of their instrument of political violence. Unfortunately, many of these behaviors do not routinely come to the attention of law enforcement personnel. The efforts described in this chapter merely scratch the surface of this important area of research. Despite this, we have identified some important patterns that may help researchers in the future as they frame questions regarding this topic.

First, we noted that the temporal aspects of the planning cycle are, to some extent, constrained by spatial variables. Travel takes time, and it can both dramatically affect the method of delivery of a weapons system to a target, as well as increase the possibility of detection. We also noted that space can be used to distance oneself from preparatory activities to avoid the possibility of detection. Consequently, we have found that terrorists appeared to intentionally commit serious crimes, such as robberies, at great distances from both their places of residence and the target location, to avoid suspicion. We also found that the travel and spatial patterns of terrorists differed significantly by group or ideological type. Most notable was the tendency of international and al-Qaeda-related terrorists to live very close to the target location.

Second, we noted that the length of terrorists' planning cycles varied significantly by group type. In particular, environmental terrorists exhibited a relatively short planning process, where most of their precursor activities occurred within a week prior to the incident. In contrast, al-Qaeda-related terrorists frequently planned and prepared for terrorism incidents for well over a year. For law enforcement officials, the importance of these differences cannot be overstated. The discovery of particular types of conduct can help establish a baseline by which law enforcement officials may gauge the length of time prior to a planned incident. For example, information regarding the sequencing of precursor conduct adds an important dimension to the decision regarding whether to intervene immediately or whether to infiltrate the group or cell in an effort to obtain more evidence to obtain a conviction. However, since the occurrence of these behaviors varies by ideology and type of incident planned, it is crucial that intelligence officials take these variables into account before making operational decisions.

Finally, we found that the *type* of terrorism incident (e.g., explosive bombing, incendiary bombing, mass assassination, etc.) is a key determinant in the length of the planning cycle. Although additional research is being conducted to confirm this sequence, it appears that the ideological goals of a group determine target selection, which in turn affects the tactics used to complete the terrorism incident. The tactics chosen determine not only the type of terrorism to be committed, but also the number of persons needed to complete the incident and the length and volume of the planning process. Although some research has examined factors affecting the lifespan of terrorist groups (Miller, 2012; Crenshaw, 1991, 1995; Cronin, 2006; Rapoport, 1992), there has been little work on the factors affecting the length of the planning process for specific incidents.

We hope that the current analysis will encourage future work in this area. Although traditional methods and statistics are viable approaches for examining terrorists' patterns of precursor conduct, new and innovative strategies are needed. If the information is to be used by intelligence analysts or the law enforcement community, new analytic strategies are critical, particularly involving determinations regarding when to intervene in an ongoing criminal investigation. Innovative visualization techniques and statistical approaches are going to be needed to adequately unravel the importance of time and space relationships in the terrorists' planning cycle.

Notes

1   Based on personal conversations with US attorneys, ATAC coordinators, Fusion Center directors, and trainers such as those affiliated with the SLATT program.
2   See, among other things, the Final Reports from NIJ grant #2003-DT-CX-0003 (PITA), NIJ grant #2005-IJ-CX-0200 (GATA), NIJ grant #2006-IJ-CX-0037 (TITAS), NIJ grant #2012-ZA-BX-0003 (Framing Theory).
3   NIJ awards "Pre-incident Indicators of Terrorist Activities," 2003; "Geospatial Analysis of Terrorist Activities," 2005; "Terrorism in Time and Space," 2007; "Identity and Framing Theory, Precursor Activity, and the Radicalization Process," 2013; and "Sequencing Terrorists' Precursor Behaviors," 2014.
4   DHS award via START Center of Excellence, "Terrorism and Extremist Violence in the United States."
5   We use the term "antecedent" interchangeably with "pre-incident" and "precursor."
6   A preliminary analysis of this data was conducted by Brent R. Klein for the DHS/START Center of Excellence as part of his undergraduate research fellowship. His insight and analysis are appreciated.

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Group-level Predictors of Political and Religiously Motivated Violence

Katharine A. Boyd

Groups that conduct political and religiously motivated violence span the globe and come in a variety of forms. The ideologies that drive their behavior range from religion to environmental concerns to nationalist agendas. Similarly, these groups conduct violence using dramatically different tactics. Some groups, such as eco-terrorist groups, use targeted methods to cause structural and financial damage while not intending to physically hurt individuals. On the other end of the spectrum, there are groups such as al-Qaeda, that use suicide attacks intended to cause many indiscriminate deaths.

There are few studies, other than qualitative case studies, that have focused on the group-level analysis of terrorists (Asal & Rethemeyer, 2008a, 2008b; Bjørgo & Horgan, 2009; LaFree & Miller, 2008; Miller, 2011; Pynchon & Borum, 1999). Case studies of terrorist groups offer valuable information comparing groups or explaining group behavior in relation to the larger political, social, and historical contexts; however, the information cannot be generalized to all terrorism (Miller, 2011). Despite the clear gap in the literature, Asal and Rethemeyer (2008b) note that "organizational level of analysis has not been a major area of investigation" (p. 447).

The neglect of group-level analysis is in part due to the difficulty in obtaining accurate data on terrorist groups. There has not been a great deal of empirical research on terrorist groups, in part because of the challenges of acquiring accurate data on clandestine groups. Similar to terrorist incident databases, most group-level data are acquired by using open-source data collection. These data generally rely on court and government documents, media sources, and reports from qualified sources. Smith and Damphousse (2009) discuss three main difficulties that complicate empirical research on the lifespans of terrorist groups. First, certain terrorist groups change names to avoid being associated with an attack. Second, group members change over time due to law enforcement efforts and recruitment. These changes in group membership are sometimes associated with changes in group names as well. Third, researchers cannot reasonably assume that all individual members belong to a single group, as some individuals may take part in several groups or among different factions as groups change over time. These factors complicate the accuracy of identifying and distinguishing groups and properly attributing violent attacks

to these groups. These difficulties also complicate data collection and analyses of group-level behavior. Specifically, these factors may affect researchers because datasets may have a large number of missing values. In addition, attacks may be incorrectly attributed to the wrong group, and attacks may be inaccurately coded as non-group-affiliated when in fact a known group committed the incident.

Due to these complications, there are few group-level databases for the study of terrorist group violence. This chapter first provides an overview of the few existing datasets and explains how each selects and collects information on groups. The following section discusses the main traits distinguishing groups and what research has shown to be the most important group-level predictors of political and religiously motivated violence.

Data Sources

At present, the main data sources on terrorist groups are: the Minorities at Risk (MAR) data (Minorities at Risk Project, 2009); the related Minorities at Risk Organizational Behavior database (MAROB) (Asal, Pate, & Wilkenfeld, 2008); the Big Allied and Dangerous (BAAD) database (Asal, Rethemeyer, & Anderson, 2009); and the US Extremist Crimes Database (ECDB) group-level data (Chermak, Freilich, & Suttmoeller, 2013; Freilich, Chermak, Belli, Gruenwald, & Parkin, 2014). These datasets have different samples of groups from different locations and time frames, as shown in Table 5.1. The data are coded differently, depending on whether the dataset is longitudinal or cross-sectional, with varying inclusion criteria and different variables coded for the groups. The following subsections discuss each of these datasets and how they differ on these criteria.

Minorities at Risk Organizational Behavior Database

The Minorities at Risk Organizational Behavior (MAROB) database is a data collection effort deriving from the MAR project, which was started in 1986 by Ted Robert Gurr. MAR is a qualitative and quantitative set of data on politically active ethnic groups of "political significance" from around the world, and has quantitative data on groups from 1945 through 2006 (Minorities at Risk Project, 2009).[1] The MAR codebook includes variables measuring the degree of conflict and violence within and between ethnic groups, as well as violence directed at the government.[2] The MAROB dataset was developed to focus on organizations within ethnopolitical groups to identify factors that explain why some groups are violent, why some are never violent, and what predicts a group's change from political efforts to violence. These organizations each claim to represent groups that are included in the MAR dataset. MAROB data currently includes violent and non-violent groups in the Middle East and North Africa between 1980 and 2004. Within 16 countries in these two regions, the MAROB dataset has coded 118 organizations representing 22 ethnopolitical groups. The dataset is currently being expanded to include groups in post-communist Europe and Latin America (Ginsberg, 2012).

There are specific criteria for the inclusion of organizations in the MAROB database. First, the group must claim to represent or consist of a specific ethnic minority, and, second, the group must be politically active at the "regional and/or national level" (Wilkenfeld, Asal, & Pate, 2008, p. 1). The groups cannot be created by the government or be an umbrella

Table 5.1 Group-level Datasets

Dataset	Sample Size (Groups)	Location	Violent and/or Non-violent	Inclusion Criteria	Number of Variables	Time Period	Longitudinal or Cross-sectional
MAR	282	Cross-national	Violent and non-violent	Ethnic minority groups	176	1945–2006	Longitudinal
MAROB	118	16 countries in Middle East and North Africa	Violent and non-violent	Ethnopolitical groups	150	1980–2004	Longitudinal
BAAD	395	Cross-national	Violent	Terrorist groups	18	1998–2005	Cross-sectional
ECDB	275	United States	Violent and non-violent	Far Right hate groups	26^{10}	1990–2008	Longitudinal

organization that encompasses separate organizations with similar agendas. Last, organizations must operate for 3 years consecutively within the designated time frame to be included in the database.[3]

The data are coded longitudinally with 150 variables coded for each year the group was operating between 1980 and 2004. These variables include organizational characteristics (e.g., group ideology and group structure); measures of external support (e.g., indicators of financial assistance from another country or from diaspora communities); as well as organizational behavior. This includes variables about violent behaviors, such as the targets of attacks (e.g., domestic or transnational attacks against civilians, government, religious structures) and type of violent attacks (e.g., assassination, hostage-taking, bombing), as well as non-violent behaviors, such as protesting. Terrorist groups make strategic choices to engage in violent and/or non-violent tactics, and this dataset allows researchers to investigate how groups utilize these different tactics over time.

Surprisingly, the MAROB dataset has been used in few papers. Although these data became publicly available in 2008 and have been used in various reports, the first journal publication with these data was only published in 2013 (Asal & Wilkenfeld, 2013). This paper includes a very important discussion of the diversity of people within a single ethnic group. There are often multiple groups operating on behalf of each ethnic group and engaging in a variety of behaviors. Some groups do not engage in violence throughout the group's existence, while other groups conduct violence at different points over time. The authors highlight the importance of identifying the many factions within an ethnic group and the danger of generalizations. Asal and Wilkenfeld's (2013) results showed that groups often engaged in more than one strategy, and that their behavior, including the use of violence, changed over time. For example, the paper highlights how Hamas has not used violence consistently over time. Rather, the group did not use violence at all in 1987, but transitioned to using violence in 1988 and did not target civilians in attacks until 1989. In a report using MAROB data, researchers have shown changes over time in the proportion of groups using violence in the Middle East (Wilkenfeld & Asal, 2007). More groups were engaging in protests or electoral politics, and fewer groups were using violence in 2005 than in the 1980s (Wilkenfeld & Asal, 2007). Specifically, the descriptive statistics of MAROB data showed that the number of active organizations increased from 39 to 96 groups between 1980 and 2004, and although more than half of the groups used violence in 1986 (56%), only 14% of the groups used violence in 2004 (Ginsberg, 2012).

Using MAROB data, Choi, Asal, Wilkenfeld, and Pattipati (2013) employed computer engineering methods to develop a forecasting model to identify group traits that predict a group's use of violent tactics. The study analyzed the predictive value of the model developed, and the results indicated that the model has very reliable predictive power.[4] It is necessary to note that the findings from this study may not generalize to all political or religiously motivated groups as these data are limited to the Middle East and North Africa. The findings of this study will be elaborated on later in this chapter.

Big Allied and Dangerous

The Big Allied and Dangerous (BAAD) dataset is a publicly available cross-national terrorist group-level dataset (Asal, Rethemeyer, & Anderson, 2009). The dataset was created to examine what factors contributed to group lethality. The BAAD researchers quantified information from the Memorial Institute for the Prevention of Terrorism (MIPT)'s

Terrorism Knowledge Base® (TKB®), and then extended the data through verification and open-source coding. The coders for the BAAD database reviewed the information in the qualitative TKB data and coded this information in quantitative form, and confirmation of information was conducted for variables where contradictory information was found.[5]

There are 395 terrorist organizations that conducted at least one attack and operated between 1998 and 2005 in the dataset. The dataset includes groups that conduct domestic and/or transnational attacks. The dataset lists the country of origin, referred to as the "home-base country," for each group, and includes information on each group's ideology, size, state sponsorship, and the number of alliances with other terrorist groups. The BAAD has cross-sectional data with a total of 19 variables.

The dataset is currently being expanded to code information longitudinally, from 1998 to 2012, and include more variables. The new dataset is called the Big Allied and Dangerous, Version 2 (BAAD2) and has 140 organizations coded with information available on the START website. The BAAD2 inclusion criteria includes terrorist organizations as well as insurgent groups. The researchers have stated that the third version, BAAD3, is currently being collected that will include additional groups and more years of longitudinally coded information (Asal & Rethemeyer, 2015).

US Extremist Crime Database (ECDB)

The US Extremist Crime Database (ECDB) includes data on violent and non-violent Far Right hate groups in the United States. The group data collection is part of the relational ECDB dataset that includes information on incidents, individual perpetrators, victims, and related businesses. The ECDB includes illegal violent and financial incidents conducted by at least one extremist, and is unique because it includes both ideological and non-ideologically motivated incidents. For example, this dataset codes a Far Right extremist killing a police officer for ideological purposes, as well as an extremist killing his girlfriend for non-ideological and non-movement-related activity. The ECDB also codes an extremist killing an informant for movement purposes, though this would not be ideological (Freilich, Chermak, et al., 2014).

Violent and non-violent Far Right groups operating in the United States between 1990 and 2008 were identified for inclusion in the ECDB from the *Intelligence Report* and *Klanwatch* publications released by the Southern Poverty Law Center (SPLC). More than 6,000 groups were found. Researchers used similar inclusion criteria as the MAROB database, such that groups had to exist for at least 3 years consecutively, which reduced the sample to 550 groups. From the 550 groups, a random sample of 275 groups that matched the Far Right and group definitions for this study were selected for inclusion.

Chermak, Freilich, and Suttmoeller (2013) used these data to analyze the factors that contribute to whether a group was violent or not throughout the time period. A group was coded "violent" if its members conducted at least one violent crime that was motivated by Far Right ideology. Of the 275 groups in the sample, 21% were categorized as violent. The study also compared groups that were frequently violent, committing on average 20 violent crimes, to those who were rarely violent. In this sample, 9% were coded as frequently violent. The study focused on how organizational capacity, constituencies, strategic connectivity, and the structural arrangement of the group affects violent behavior. Another study by Kerodal, Freilich, Chermak, and Suttmoeller (2015) focused on a subsample of the group ECDB data to investigate 60 groups, half of which engaged in violence. These groups were

coded longitudinally for each year the group existed, to analyze how group traits predicted whether a group used violence, the targets of attacks (government or civilian), and if a group engaged in legal political behavior. For his dissertation, Suttmoeller (2014) coded an additional 135 groups that did not persist for 3 years to compare what group-level factors distinguished groups that persisted for 3 years or longer to those that did not. As with the MAROB dataset, the ECDB is limited to a specific geographic region, the United States, and so generalizations from these studies are limited. However, this dataset has unique potential for future research because the relational data include information about individuals within the extremist groups as well as non-ideological incidents.

Group-level Predictors of Violence

Quantitative analysis is used to identify trends and patterns in how groups operate and analyze what group traits are predictors of violence. The databases discussed in the preceding text (i.e., MAROB, BAAD, ECDB) have a large range in the number of variables coded for each group, with 18 variables in the BAAD dataset and 176 variables in the MAROB dataset. There are similarities in the types of traits identified, though the variables used to capture these traits are not measured entirely alike across databases. These traits include a group's ideology, the size of the group, the number of alliances to other groups, the group's age, and the financial resources available to the group. The following subsections discuss the findings in the literature for group traits theorized to impact group behavior and the potential for violence.

Ideology

Drake (1998) argues that ideology is the most important feature of a group. The ideology a group associates with is the motive behind their actions. Drake (1998) defines ideology as "the beliefs, values, principles, and objectives—however ill-defined or tenuous—by which a group defines its distinctive political identity and aims" (pp. 54–55). Groups' ideologies are often categorized into general themes, such as religious, left–revolutionary, Far Right, nationalist–secessionist, or hybrid (Crenshaw, 2010).

We see similar, but different categories of group ideologies coded in the group databases. The MAR data distinguishes groups by degrees of distinctiveness from the majority population on four main factors: language, religion, race, and customs (Minorities at Risk Project, 2009). The MAROB database has a series of organizational ideology variables that are not mutually exclusive. These categories include: religious, leftist (economic), rightwing (economic), nationalist, ethnic, supremacist, environmental, and other. Additionally, this dataset includes binary variables to indicate if the group promotes gender inclusion or exclusion, and if the group advocates for an authoritarian or democratic government (Asal et al., 2008). The BAAD dataset distinguishes groups as purely religious, purely ethnonationalist, left-wing, groups that are religious–ethnonationalist, groups that contain a religious ideology, and groups that contain ethnonationalist ideology (Asal, Rethemeyer, & Anderson, 2009).

Although the ECDB relational database includes information on a variety of ideological groups, the group data that have been used in studies focus on Far Right groups in the United States. The Far Right ideologies in the United States include different

dominant features that vary across groups. Far Right is operationalized for the ECDB as an individual or groups who are:

> fiercely nationalistic (as opposed to universal and international in orientation), anti-global, suspicious of centralized federal authority, reverent of individual liberty (especially their right to own guns, be free of taxes), believe in conspiracy theories that involve a grave threat to national sovereignty and/or personal liberty, believe that one's personal and/or national "way of life" is under attack and is either already lost or that the threat is imminent (sometimes such beliefs are amorphous and vague, but for some the threat is from a specific ethnic, racial, or religious group), and believe in the need to be prepared for an attack by participating in paramilitary preparations and training and survivalism. It is important to note that mainstream conservative movements and the mainstream Christian right are not included (Freilich, Chermak, & Caspi, 2009, p. 499; see also Freilich, Adamczyk, Chermak, Boyd, & Parkin, 2015).

The ECDB includes variables to account for each of these different ideological streams within Far Right extremism. For example, the ECDB has measures to indicate if the group's dominant ideology is hate or bias related, anti-government, religious, or if the group is primarily driven by profit.

It is crucial to recognize that terrorist group ideologies are not entirely distinct from mainstream political or religious opinions, but rather reflect a radical segment of ideological opinion within a society combined with a belief in the use of violence (Neumann, 2009). The datasets that include both violent and non-violent groups help distinguish how ideological differences factor into the decision to use violence.

Comparing violent and non-violent groups with the MAROB database, Choi, Asal, Wilkenfeld, and Pattipati (2013) showed that religious ideology, support for gender exclusion, cultural grievances, and using violent rhetoric all significantly predicted the use of violence. In contrast, their study also showed that the likelihood of a group engaging in violence was significantly decreased for groups advocating for democracy and engaging in elections. A study on violent and non-violent Far Right groups using the ECDB data showed that groups that published literature related to their ideology were less likely to be involved in violence (Chermak et al., 2013). In another study using ECDB data coded over time, researchers found that the group's dominant ideology significantly influenced whether a group engaged in violence (Kerodal et al., 2015). The results showed that Far Right groups that were religious, hate-inspired as well as religious, or antigovernment were less likely to engage in violence than hate groups that were not religious. In contrast, groups that were inspired by greed and bias were more likely to engage in violence. A Far Right group's dominant ideology also had the strongest effect on groups' involvement in legal political activity. Interestingly, anti-government groups were found to be more likely to engage in this behavior than the reference category, non-religious bias groups. In comparison, religious bias groups were less likely to partake in legal political behavior than the reference. The findings in these studies indicate that ideology and the various means by which a group may promote their ideology have different effects on whether a group uses violence.

The literature suggests how ideology may also affect the nature of the violence a group chooses to engage in. For example, a group's ideology distinguishes those who are guilty for the present state of affairs and provides the moral framework used to justify violence (Drake, 1998). Although Drake specifies that ideology is not the only factor influencing target selection, ideology delineates a range of who or what can be justifiably targeted. In a cross-national study using the BAAD data, a group of scholars evaluated how group traits influence the selection of soft targets, which are defined as "private individuals and

undefended civilian installations," which includes "private citizens, tourists, the media, religious groups/organizations, educational institutions, and/or nongovernmental organizations" (Asal, Rethemeyer, Anderson, et al., 2009, p. 259; 266–267). The study analyzed the factors that influenced whether a group attacked soft targets at all, as well as the frequency for attacking these targets. The findings of this study showed that religious and religious-ethnonationalist ideologies were all associated with a group choosing to attack soft targets. Interestingly, however, ideology did not distinguish the frequency of attacks. The authors showed that other traits, discussed later on in this chapter, are predictors for how often a group attacks soft targets.[6]

Unlike the grievances of many other ideologies, religion is not limited to geographic or national boundaries. Hoffman (1999) stated that religious ideology is used to legitimize violence toward "an almost open-ended category of opponents" (p. 20). Group ideology is often associated with the distinction between discriminate and indiscriminate targets and the number of fatalities in an attack (see Mengel, 1977; Hoffman, 1999). Mengel (1977) differentiated attacks with discriminate and indiscriminate targets, claiming that the former are attacks against specific targets conducted to achieve political agendas, while indiscriminate attacks are perpetrated against non-specific, random targets, intending to cause mass casualties and cause social panic at large. In the 1970s, Brian Jenkins noted that "terrorists wanted a lot of people watching; they did not want a lot of people dead" (Jenkins, 2001, p. 8). More recent studies show that terrorist attacks are becoming more lethal (see Hoffman, 1999; Schmid, 2004), and Jenkins (2006) updated his phrase to note that, in the present day, "terrorists want a lot of people watching and a lot of people dead" (p. 119). Scholars have argued that the ideologies of contemporary terrorism are more accepting of lethal violence than ideologies of past terrorist groups (Asal & Rethemeyer, 2008b; Hoffman, 1999, 2006; Laqueur, 1998, 1999, 2004; Lesser et al., 1999; Simon & Benjamin, 2000, 2001, 2002). Many scholars argue that targets are less discriminate in recent years due to the growing number of groups motivated by religion that seek to inflict mass casualties (Juergensmeyer, 2003; Neumann, 2009; Rapoport, 1998).

Two cross-national studies using the BAAD dataset evaluated the use of lethal violence (Asal & Rethemeyer, 2008a, 2008b). The first study investigated whether groups kill or not and found that religious and religious-ethnonationalist groups were most likely to kill (Asal & Rethemeyer, 2008a). Groups that were ethnonationalist, leftist, or of an "other" ideology were less likely to kill than religious and religious–ethnonationalist groups. Anarchist groups were the least likely to kill, aside from the environmentalist and animal rights groups, which did not cause any deaths in this dataset between 1998 and 2005. The second study evaluated the degree of lethality, the total number of deaths attributed to terrorist groups in this time period (Asal & Rethemeyer, 2008b). Similar to the previous study, the findings from this study showed that religious–ethnonationalist groups and religious groups were the most lethal.

Much like ideology may influence the targets of attacks and the number of fatalities, scholars theorize how ideology likely influences the methods selected to conduct terrorist violence (Asal, Rethemeyer, Ackerman, & Park, 2010; Neumann, 2009; Rapoport, 2002). One mode of attack that has gained a lot of attention from researchers in the last two decades is suicide attacks (see review by Crenshaw, 2007). This mode of attack dates back centuries, but modern suicide attacks by non-state actors began in the early 1980s in Lebanon (Atran, 2003; Crenshaw, 2007). Since then, the use of suicide attacks has increased exponentially (Moghadam, 2008). Many scholars attribute the use of suicide attacks to terrorist groups with religious ideology, specifically radical Islamist groups (Khosrokhavar, 2005;

Moghadam, 2006, 2008). Though Christians and Jews, as well as secular groups, such as the Liberation of Tigers of Tamil Eelam (LTTE), and communists have used this tactic (Pape & Hoveyda, 2005), the method currently appears to be more frequently used by radical Islamist groups.[7] Religious ideology is more often associated with suicide attacks because religion provides a sense of purpose and obligation and, therefore, has more power than a political ideology to encourage one to choose to end his or her own life for a cause (Khosrokhavar, 2005).

The categorization of group ideology in datasets allows researchers to evaluate patterns in quantitative analysis; however, this can be complicated when there is significant variation within each of these categories. For example, religiously motivated groups affiliated with different denominations may have few other ideological similarities. Aum Shinrikyo was an eclectic religious cult with apocalyptic motivation, seeking weapons of mass destruction to end the world. In contrast, the Army of God is a Christian religious group in the United States that specifically targets abortion clinics while also using anti-government and anti-homosexuality language in the group's manual. Within Islam, there are terrorist groups representing various factions, such as the Shia and Sunni faiths. These groups have different agendas and sometimes target members of the other Islamic factions. These groups are all religious, and would often be combined within a single ideological category, though they have large differences in motivation. Also complicating ideological classification is the fact that groups may be driven by multiple ideological categories that do not fall neatly into a single category. For example, Hamas is motivated by both Islamic religious ideology and nationalist political ideology. It can be difficult to ascertain the aspect of a group's ideology that has greater influence on the propensity for violence, and adding categories of combined ideological motivations may only further complicate the analysis. Crenshaw (1992; cited in Silke, 2008, p. 12) reasonably warns that, by combining very different groups into an analysis, you may "get conflicting or ambiguous results."

The studies that use data on Far Right groups avoid some of these complications by focusing on variations of a single ideology to identify the other group traits that influence a group's propensity for violence (Chermak et al., 2013; Suttmoeller, 2014). This leads to the next group characteristic, group size.

Group Size

Group size refers to the number of people operating in a group. Some groups have very few members, while others have a large number of operatives. Group members may be geographically dispersed or clustered in a specific location. Group size is often believed to influence the financial, material, and skill resources available to a terrorist group (Asal & Rethemeyer, 2008b). Larger groups have more manpower to coordinate operations and conduct attacks. These resources can influence the amount of violence that a group inflicts, as well as how and where a group conducts attacks. These relationships suggest that bigger groups are likely more effective than small groups; however, it has been suggested that the benefits of a large group size may be compromised because of the difficulty in coordinating logistics successfully with many members (Oots, 1986).

The research on how group size influences terrorist violence has drawn similar conclusions.[8] Generally speaking, larger groups have been found to be more dangerous than small groups. Larger groups were associated with extreme violence among Far Right groups in the United States (Chermak et al., 2013). Cross-national studies using BAAD data suggest

that this result generalizes to other terrorist groups. Although group size was not a predictor of whether a group chooses to attack soft targets, it was found to be a significant predictor of the frequency of attacks on soft targets (Asal et al., 2009). Smaller groups were found to be less likely to conduct attacks that caused deaths (Asal & Rethemeyer, 2008a), while larger groups were also associated with a greater degree of lethality (Asal & Rethemeyer, 2008b). More research is needed to investigate how group size influences other aspects of terrorist violence, and to extrapolate the ways in which group size has these effects.

Alliances

Terrorist groups can learn tactics and obtain materials from other groups with whom they are allied. Groups with working relationships can provide and share physical materials, financial resources, as well as skill sets that may influence a group's ability to initiate violence, and affect the manner in which a group conducts attacks. Alliances between organizations are measured in the BAAD and ECDB databases. The BAAD dataset indicates the number of alliances to other terrorist groups and has been used to evaluate social networks. The ECDB data used in published papers has binary variables indicating if a group is linked to domestic Far Right groups, or linked to Far Right figures, and also includes a variable signifying if the group is in conflict with domestic Far Right groups.

Unlike group size, studies evaluating the impact of alliances to other groups have not produced entirely consistent results. The BAAD data were used to show that the "propensity to avoid killing declines" for groups with more alliances (Asal & Rethemeyer, 2008a, p. 257). Similarly, alliances were a significant predictor of the number of deaths caused by a terrorist group such that groups with more alliances were associated with more deaths (Asal & Rethemeyer, 2008b), and more attacks targeting soft targets (Asal et al., 2009). In contrast, a study using ECDB data to analyze Far Right groups in the United States showed that links to other terrorist groups was not a significant predictor of whether a group was violent or extremely violent (Chermak et al., 2013). Rather, a group in conflict with another Far Right group was a significant predictor of extreme violence.

The difference in results may be due to the different samples with the BAAD dataset for evaluating violent groups cross-nationally and the ECDB for Far Right groups in the United States, some of which are not violent. The ECDB results suggest the value of also investigating group competition in addition to alliances. Competition or rival groups may cause complications for maintaining logistic and financial support to operate effectively. The MAROB dataset includes measures of intra-organizational and inter-organizational conflict. These variables have not yet been used to evaluate groups' propensities for violence. It would be worthwhile to add a measure of conflict between groups to the cross-national BAAD group dataset to further explore how this influences group behavior.

Group Age

Terrorist groups vary in how long they operate. Group longevity differs dramatically; many groups last less than 1 year, while others have functioned for decades. Hoffman (1999) argued that natural selection applies to terrorist groups, with long-lasting groups adapting to counterterrorism policies. Older groups have greater periods of time to conduct attacks; however, such groups may be best able to operate for longer if they do not cause an excessive

number of deaths. Groups that operate for a long time must strategically select targets and modes of attack, and calculate the optimal number of attacks and level of fatalities that enable the group to best maintain financial and political support over time.

The results evaluating the influence of group age on terrorist violence are not entirely consistent across studies. Researchers using the BAAD dataset found that age was not a significant predictor of whether a group kills (Asal & Rethemeyer, 2008a), or the number of deaths attributed to a group (Asal & Rethemeyer, 2008b). Among Far Right groups in the United States, however, older groups significantly predicted that a group engaged in violence and that a group used extreme violence (Chermak et al., 2013). Much like the contrasting findings for alliances, the different results across studies for group age may be due to the different outcomes being assessed, the different samples being analyzed, or the different contexts in which they operated.

Financial Resources

Financial resources enable a group to conduct basic operations and carry out terrorist attacks. Resources may come from members within the group or from outside sources, such as diaspora communities or state-sponsorship. Some weapons are not particularly expensive, such as suicide vests; however, groups that have more financial resources are better able to acquire weapons and equipment in a clandestine manner. For example, terrorists associated with rogue states have better access to weapons, which likely influences how a group conducts itself (Hoffman, 1999).

The MAROB dataset indicates if a group receives external support from a foreign state or from diaspora communities. Additionally, this dataset includes a measure of whether the group partakes in various types of crimes that may provide financial resources. Researchers using this dataset found that the probability that the group engaged in violence increased if the group received external support from a state, aid from diaspora communities, or engaged in criminal smuggling (Choi et al., 2013). The BAAD dataset has a measure indicating if the group is state-sponsored. Studies show that state-sponsorship was not a significant predictor for whether a group was lethal (Asal & Rethemeyer, 2008a), and it did not increase the number of deaths a group caused (Asal & Rethemeyer, 2008b).[9] None of these variables specify the amount of financial support provided, because it is difficult to accurately estimate across these samples of clandestine groups.

Other Group Traits

Each dataset has additional variables that are not consistently coded across datasets. For example, the BAAD dataset includes a measure indicating if the terrorist group has ever controlled any territory. This variable was a significant predictor of groups causing numerous deaths (Asal & Rethemeyer, 2008b). The MAROB database includes a measure of group popularity, and a study found that more popular groups were less likely to use violence (Choi et al., 2013). The ECDB dataset includes measures associated with group leadership and structure. A study found that Far Right groups with charismatic leaders, or groups with a leaderless structure, were more likely to be violent, and groups with a leaderless structure were also associated with engaging in extreme violence (Chermak et al., 2013).

Conclusion

This chapter shows the significant efforts to develop and analyze group-level data to determine predictors of political and religiously motivated violence. The datasets include different groups with varying inclusion criteria and variables, but the research done across different samples using these data sources shows some consistencies about how group traits influence violence. There is still a lot of research that can be done to identify how these group factors influence other forms of violence. For example, future studies can use this data to compare what group traits influence transnational attacks, or to compare the choices of different targets and modes of attack.

These group-level datasets are limited to what data are available. Terrorist groups can differ in many respects not measured in any of these datasets that still influence how these groups operate. For example, the levels of education or the age of group members may dramatically differ across groups and may influence what skills are available to the group. This information, however, is difficult to measure without accurate information on all group members. There are a few terrorism datasets with the individual as the unit of analysis, which can be aggregated to estimate group trends. For example, Sageman (2008) gathered individual-level data for the al-Qaeda movement in *Leaderless Jihad: Terror networks in the twenty-first century*. He noted the differences in age, origin, education, employment, and criminal history among individuals associated with joining al-Qaeda at different points in time. Similarly, the John Jay and ARTIS Transnational Terrorism (JJATT) database includes information on individuals associated with a few select terrorist groups in Southeast Asia, North Africa, Middle East, and a few in Western Europe (Atran, 2009). The American Terrorism Study (ATS) includes information about terrorism cases and individuals indicted on terrorism charges in the United States since 1988 (Smith & Damphousse, 2007). ATS data from 1980 to 2002 include 574 individuals within 86 terrorist groups. The Operation and Structure of Right-Wing Extremist Groups in the United States, 1980–2007 (Simi, 2010) is a subsidiary database from the ATS dataset with information on individuals charged in Far Right incidents.

The data on these individuals may provide some worthwhile information on recruiting tactics and the composition of groups. However, there are validity concerns that are essential to note regarding individual-level data being used to make estimates for groups. These groups are clandestine, and members often go to great efforts to hide their identities. As a result, it is necessary to consider that the individuals in these datasets may not be representative of those who were not identified or caught by law enforcement, and therefore estimates based on these individuals for the group at large may not be accurate.

The studies discussed in this chapter identify different group-level factors that may be key predictors of the use of violence. The MAROB database, similar to the MAR, highlights the influence of state policy directed at the group. Conceptually, this is a crucial factor as policies, which include repressive actions as well as conciliatory behavior, are implemented with the intention of influencing terrorist group behavior. Analyzing groups independent of state behavior may produce inaccurate or biased results. The researchers using MAROB data emphasized the dynamic relationship between state and group behavior. Choi et al. (2013) showed that violence or oppression by the state increased the likelihood that a group would be violent. The BAAD dataset is currently being expanded to include longitudinally coded policies being directed at the group, which will be a significant contribution to the cross-national group-level data (Asal & Rethemeyer, 2015). Cronin (2009) shows that not all groups respond the same way to government policies,

so including this data may help explain violence and provide policy implications on how to reduce it. Research can help identify what policies are most effective toward which types of groups, but it is essential to note that the analyses and findings are only as good as the data collection.

This chapter covers the current state of research on group-level predictors of religious and politically motivated violence. The different datasets and the differing inclusion criteria and coding methodologies were discussed, followed by the research analyzing group traits. It is essential to recognize the complications in coding group-level data and the dynamic nature of a terrorist group. Not all extremist groups are violent, and not all groups that become violent maintain this strategy. Future research will continue to refine methods of coding and the selection of key variables in an effort to best understand and predict group violence.

Notes

1   Two criteria are used to determine if a group is "politically significant." First, the group must be shown to collectively suffer or benefit from "systematic discriminatory treatment *vis-à-vis* other groups in a society." Second, the group serves as the foundation "for political mobilization and collective action in defense or promotion of its self-defined interests" (see http://www.cidcm.umd. edu/mar/about.asp for more details). The AMAR project, another subset of MAR data, was initiated in 2014. AMAR was created to overcome selection bias in the MAR dataset. Specifically, the AMAR selects groups based on "'social relevance' rather than discrimination or political mobilization." The AMAR criterion has 1,200 ethnic groups, of which 74 new ethnic groups were randomly selected and coded. These data are not yet available to the public.

2   The quantitative MAR dataset codes for the degree of conflict between factions within an ethnic group as well as between the ethnic group and other communal groups. The value of conflict ranges from $0 =$ no conflict to $5 =$ "Protracted communal warfare." The ethnic groups are also coded for rebellion ($0 =$ none reported, to $7 =$ Civil war). The MAR dataset also codes for government repression of the ethnic group, ranging from $0 =$ none reported to $5 =$ "Violent coercion, killing" (Wilkenfeld, Asal, & Pate, 2008, pp. 18–24).

3   The MAROB database does not explicitly define what it means to "operate" for 3 years consecutively. The database indicates that researchers watch the groups named in the sources to keep note of what groups might be included after 3 years of activity.

4   Choi et al. (2013) report that the model has a predictive power of 0.908, which is very reliable.

5   The BAAD dataset notes that MIPT data had 104 additional groups (total of 499) that are not included in the BAAD dataset because the "MIPT had no information or information that could be duplicative" on these groups (for more information, see https://dataverse.harvard.edu/dataset. xhtml?persistentId=hdl:1902.1/16062).

6   There are two additional studies using the BAAD dataset that were presented at conferences but are yet to be peer reviewed and published, so they are not elaborated on in the text. The first used BAAD data to investigate how group predictors influenced whether a group targets aviation. This study found that, of 395 groups, only 18 (~5%) attacked aviation targets (Asal, Rethemeyer, Bellandi, Legault, & Tynes, 2010). The second study, also using BAAD data, investigates how group characteristics influence the decision to pursue CBRN weapons (Asal, Rethemeyer, Ackerman, & Park, 2010).

7   In a study investigating the effectiveness of suicide attacks, Pape (2005, 2003) argues that religion is not a root cause for suicide terrorism. His study highlights that the LTTE conducted the majority of suicide missions, and that the majority of suicide attacks in South Lebanon were not by Islamic fundamentalists, but communists and Christians. It is necessary to highlight that his data were collected until 2003, so it does not include the large number of suicide attacks in more recent

years. Additionally, Moghadam (2006) notes that Pape's inclusion of suicide terrorism toward military targets makes the LTTE have the largest number of suicide attacks. Using a more focused definition of terrorism, Moghadam shows that Hamas would now have the largest number of suicide attacks in that time period.

8   Note that the MAROB dataset does not include a measure of group size.

9   Although the 2008a study indicates that state sponsorship is not a predictor of whether a group is lethal, the 2008b study says "state sponsorship tends to make organizations more likely to kill but state sponsorship does not tend to increase the number of people killed by an organization" (Asal & Rethemeyer, 2008b, p. 445).

10   This is the number of variables used in the analysis in Chermak, Freilich, and Suttmoeller's (2013) paper, but the dataset likely codes more variables than are included in this paper.

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6

Country-level Predictors of Terrorism

Nancy A. Morris and Gary LaFree

As a result of the growing interest in terrorism and the increasing availability of open-source terrorism databases, we have seen rapid increases in the number of studies that examine country-level correlates and causes of terrorism. These studies have contributed to our understanding of terrorism in at least four ways. First, cross-national comparative studies have identified the effects for a number of country-level structural variables such as economic development, failed states, pre-existing political instability, and democratization on annual counts of country-level terrorism (Abadie, 2006; Li, 2005; Piazza, 2007, 2008, 2011; Mullins & Young, 2012; Freytag et al., 2011; Sandler, 2014). Second, the samples used in these studies have been larger and more varied than is typical in cross-national criminological studies of homicide and other crimes, including a wide range of both industrializing and industrialized countries. Third, many of these studies have found that the effects of country-level structural variables such as economic development and democracy are curvilinear or vary by the ways that countries are connected to terrorist attacks, as either locations of perpetrators, attacks, or targets. And finally, prior research in this area has highlighted the complexities of distinguishing between domestic and international sources of terrorist attacks in cross-national comparative analysis.

In this chapter, we review the quantitative empirical literature on the correlates and causes of country-level terrorist attacks. We first conceptualize and define terrorism and discuss the benefits and limitations of open-source databases as sources of terrorism data, as compared with traditional sources of cross-national comparative crime data. We then review quantitative studies that have examined the correlates of country-level domestic and international terrorism.[1] We focus on economic, political, and demographic predictors of terrorism. Finally, we conclude with a brief discussion of areas for future research.

Defining and Measuring Terrorism

Defining terrorism has long been a challenge for policymakers. The fundamental nature of this challenge was famously stated by Palestine Liberation Organization chairman Yasser Arafat, who noted in a 1974 speech before the United Nations that "One man's terrorist is another man's freedom fighter." Defining terrorism has been no easier for researchers. Schmid and Jongman's (1988:5) survey of researchers found that they employed over 100 different definitions of terrorism, with 84% stressing violence or force in their definitions, 65% emphasizing political motivation, 51% emphasizing fear, and 47% emphasizing threats. Despite the considerable complexity, most of the databases that have been used in the studies included in this review have used definitions that are clearly related. For example, two frequently studied terrorism databases use the following definitions:

ITERATE database: "the premeditated use, or threat of use, of extra-normal violence or brutality to obtain a political objective through intimidation or fear directed at a large audience" (Enders & Sandler, 1999:147–148).
Global Terrorism Database (GTD): "the threatened or actual use of illegal force and violence by non-state actors to attain a political, economic, religious, or social goal through fear, coercion, or intimidation" (LaFree, Dugan, & Miller, 2015:13).

While these two definitions differ, note that both stress violence or the threat of violence for a political objective. While ITERATE's definition does not indicate that it is limited to non-state actors, this is nonetheless a specification for inclusion that the database uses. And while the GTD mentions economic, religious, and social along with political goals, in practice most of the cases it includes could be subsumed under the general heading of "political." In short, for the purposes of this chapter, we will assume that terrorism is *violence or the threat of violence by a non-state actor for a political purpose.*

Open-source Data on Terrorism

As LaFree and Dugan (2004:61) noted more than a decade ago, collecting country-level data on terrorism events is a daunting task. For criminology in general, crime data have traditionally come from one or more of three sources, corresponding to the main social roles commonly associated with crime: (1) "official" data collected by legal agents, especially the police; (2) "victimization" data collected from the general population of victims and non-victims; and (3) "self-report" data collected from offenders. All three of these traditional data sources are problematic for the study of terrorism. Victimization surveys are of limited value because victims are often chosen at random, are unlikely to know or sometimes even encounter offenders, and in many cases are killed by their attackers. Self-report surveys of terrorists (or more commonly, ex-terrorists) have been useful (e.g., Merari, 1991; Horgan, 2008), but raise obvious practical and security challenges. Official data may not be available for most countries of the world, and available data may be of questionable validity and reliability because of inconsistent coding and limited availability (LaFree, Morris, & Dugan, 2010; Dugan & Distler, this volume).

For nearly a half century, in response to the limitations of victimization, self-report, and official data on terrorist attacks, researchers have relied on open-source, unclassified, terrorist

event data. These event databases generally use news reports from electronic or print media to collect detailed information on the characteristics of attacks. Most of the open-source databases on terrorism started in the late 1960s—at the same time that portable cameras coupled with satellite technology first allowed reporters to send stories and pictures almost instantaneously between any two points in the world. The strength of the association between terrorism and the media prompted Schmid and De Graaf to conclude (1982:9) that "terrorism and mass communication are linked together. Without communication there can be no terrorism."

Major Terrorism Open-source Databases

By the 1970s, there were organizations in several countries (especially the United States and the United Kingdom) collecting data on terrorist attacks from unclassified media sources. While all of these terrorism event databases had unique individual characteristics, they all shared a reliance on open media accounts of terrorism—collected from some combination of news wire services, unclassified government reports, and leading international newspapers. Over time, the Internet played an increasingly important role in open-source data collection efforts. The most important of these event databases are the International Terrorism: Attributes of Terrorist Events (ITERATE) data; the Global Terrorism Database (GTD); the RAND–MIPT (Research and Development–Memorial Institute for the Prevention of Terrorism) data; the US State Department data; and the Worldwide Incidents Tracking System data (WITS). The evolution of these databases is described elsewhere (LaFree, Dugan, & Miller, 2015: Chapter 2), and so we provide only a brief review here. ITERATE, the original US State Department data, and the RAND–MIPT data until 1997 are limited to international attacks; WITS data include both domestic and international attacks but are limited to the years 2004–2012; and GTD includes both domestic and international attacks from 1970 to the present.

Strengths and Weaknesses of Event Databases

Woolley (2000) provides a general discussion of the limitations associated with media-based data, many of which also apply to the study of cross-national measures of terrorism. Woolley argues that media-derived data may suffer from bias arising from differences in media processes by region or urban versus rural areas and the reporting of larger versus smaller events. Prior evidence (Danzger, 1975; Howell & Barnes, 1993; Dugan & Distler, this volume) indicates that regional variation in media reporting may occur due to variations in media resources. Additionally, many (Li, 2005; Drakos & Gofas, 2006a) have noted the potential for bias resulting from open-source media-derived data when assessing terrorism at the country-level, and, in particular, the relationship between regime type and terrorism.

Selection bias for high-profile cases is also a possibility as media reports are more likely to exclude events that are less newsworthy (Snyder & Kelly, 1977; Woolley, 2000; Dugan & Distler, this volume). Chermak and Gruenewald (2006) examined media coverage for 412 known incidents of domestic right-wing extremist terrorism and found that 55% had received coverage in *The New York Times*. Chermak et al. (2012) compared incidents from several media-derived databases of extremist right-wing domestic terrorism and found that

high-profile incidents such as the Oklahoma City bombing were most likely to be included across all sources. Although it is promising that identical cases were found across different databases, Chermak et al. (2012) also found that incidents identified most consistently across the various data sources represented less than 6% of all known right-wing terrorist incidents. Thus, high-profile incidents, such as those with large numbers of fatalities, may not be generalizable to all terrorist attacks.

Another limitation is that media reports of terrorist events oftentimes increase following the occurrence of a high-profile event, leading to what researchers (Surette, 1999; Damphousse & Shields, 2007; Chermak et al., 2012) have called an "echo effect." Based on evidence from the United States Extremist Crime Database, Chermak et al. (2012) found that the number of separate sources reporting extremist homicides after the Oklahoma City bombing increased from 2.3 sources during 1990–1994 to 3.5 sources during 1995–1999. Changes in the prominence of certain events in the media may also change over time (Woolley, 2000); this is likely to occur especially after high-profile incidents, such as the coordinated attacks on 9/11.

To counter these problems, Woolley (2000:158) suggests that media-generated event databases use multiple media sources to guard against selection biases arising from differing media processes (regional bias, extreme events) and be attentive to the possibility of censored samples of events. Many media-derived databases, including the GTD, ITERATE, and RAND–MIPT, have implemented this suggestion using multiple media outlets and venues (print and electronic) to gather data. The sources of media include not only major national sources, but local country-specific sources as well. Woolley (2000) also suggests that analyses of open-source media data create additional variables to capture the prominence of events in time, adjusting for changes in recording practices (for similar suggestions, see Dugan and Distler, this volume).

Despite these limitations, it is important to note that not all indications of the validity of media-based data are negative. Importantly, there is substantial evidence showing that reporting of objective acts (i.e., event counts rather than interpretations of events) and "large and violent events" (Woolley, 2000:158) are more likely to be reported reliably and without bias (Snyder & Kelley, 1977; Franzosi, 1987). Compared with more ordinary crimes, terrorism also has additional characteristics that may make media reporting uniquely attractive. Perhaps most importantly because terrorists usually seek to draw attention through the media, coverage of terrorist attacks may be more complete than it would be for ordinary crimes such as burglary and auto theft. Jenkins' (1975:16) often-cited quote that "terrorism is theatre" reflects this sentiment.

Finally, terrorism open-source databases have a huge advantage not enjoyed by any other major form of data on worldwide crime: rather than being limited to a small number of highly industrialized countries, most open-source terrorism databases include information on every country of the world. In summary, researchers and policymakers use open-source databases on terrorism because, given an imperfect set of options, they are often the best available.

Prior Literature: Correlates of Country-level Terrorism Attacks

Recent research on the predictors of both domestic and international terrorism at the country-level has focused especially on political, economic, and demographic variables (Li, 2005; Freytag et al., 2011; Sandler, 2014). In Table 6.1, we summarize several cross-national

Table 6.1 Cross-National Comparative Studies of Terrorism

Name	Sample Size	Terrorism Data	Outcome	Time Period	Analysis	Significant Independent Variables
Abadie, 2006	118–156	GTI	Terrorism risk	2003–2004	OLS with heteroskedasticity; robust standard errors	Political Rights Index (+), PRI2 (−), Linguistic Fractionalization (+)
Azam & Delacroix, 2006	178	ICT	Number of total incidents	1990–2004	Negative binomial regression	Foreign Aid (+), Population (−)
Azam & Thelen, 2008	176	ICT	Number of international incidents	1990–2004	Negative binomial regression	GDP (−), Foreign Aid as percent of GDP (−), Education (−)
Basuchoudhary & Shugart, 2010	118	ITERATE	Number of international incidents	1982–1997	Negative binomial regression	Economic Freedom (−)
Blomberg & Hess, 2008a	179	ITERATE	Number of international and domestic incidents	1968–2003	Panel regressions	GDP (+), Open (−), Democracy (+), Literacy Rate (+), Language Fractionalization (+), Religious Fractionalization (−)
Blomberg & Hess, 2008b	179	ITERATE	Number of international incidents	1968–2003	Tobit regression	Target countries: Democracy (+), Trade/GDP (+); origin countries: Democracy (−), Trade/GDP (−)
Blomberg, Hess, & Weerapana, 2004	127	ITERATE	Number of international incidents	1968–1991	Markov process	High Income and Democracy (+)
Boehmer & Daube, 2013	144	GTD	Number of domestic incidents	1970–2000	Negative binomial regression	Human Development (−), Pluralist Political System (−), Minerals (−), Primary Education (−), Number of of Ethnic Groups (+)
Bravo & Dias, 2006	60–85	RAND–MIPT	Number of total incidents	1997–2004	OLS regressions	Plurist Political System (−), Mineral Reserves (+); Literacy (−), EF (−), HDI (−)
Burgoon, 2006	92–106	ITERATE; RAND–MIPT	Number of international incidents (1968–2002); number of total incidents (1968–2003); number of completed incidents (1996–2001)	1968–2003	Cross-sectional and pooled time series	Social Welfare (−), Population (+), Government Capacity (+)

(*Continued*)

Table 6.1 (*Continued*)

Name	Sample Size	Terrorism Data	Outcome	Time Period	Analysis	Significant Independent Variables
Campos & Gassebner, 2013	119–132	RAND–MIPT	Number of total incidents	1972–2003	Fixed-effects negative binomial regression	Population (+), Regime Duration (−), Civil War (+), Guerilla War (+), Riots (+), Political Proximity to United States (+), OECD (+), Urbanization (+)
Caruso & Schneider, 2011	12	GTD	Number of domestic and international incidents; number of casualities	1994–2007	Panel negative binomial regression	Attacks: Growth Rate (−), Inflation (−), Productivity (−), Openness (−), Long-Term (−), Electoral Fractionalization (+), Right Wing Government (+); casualties: Investment Share of Real GDP (−), Growth Rate (+), Inflation (−), Openness (+), Constitutional (+)
Chenoweth, 2010	119	ITERATE	Number of international incidents	1975–1997	Negative binomial regression	Political Competition (+), Government Capability (+), Population (+)
Choi & Luo, 2013	152	ITERATE; GTD	Number of domestic and international incidents	1968–2004	Negative binomial regression with robust standard errors; zero-inflated negative binomial regression	International: Economic Sanctions (+), State Failure (+), Economic Development (+), Population (+), Post–Cold War (−), Lagged Terrorism (+); domestic and international: Economic Sanctions (+), Democracy (+), State Failure (+), Economic Development (+), Population (+), Lagged Terrorism (+)
Coggins, 2014	153	RAND	Number of domestic and international incidents	1999–2008	GEE negative binomial regression	Domestic attacks: GDP (+), HDI (−), Polity (+), PITF (+); international attacks: HDI (−), Polity (+), PITF (+)
Danzell & Zidek, 2013	34	GTD	Number of domestic and international incidents; number of casualities	2000–2009	Poisson regression	Domestic: Public Order & Safety Spending (−), Population (+), Civil Liberties (+), Repression (+), Economic Growth (−), Rpc4 (+), Urban (+); international: Civil Liberties (+), Economic Growth (+), Rpc4 (−), Urban (+); casualities: Public Order & Safety Spending (−), Population (+), Civil Liberties (−), Repression (+), Economic Growth (−), Rpc4 (+), Urban (+)

Study	N	Data	Dependent variable	Period	Method	Findings
Drakos & Gofas, 2006	139	RAND–MIPT	Number of international incidents	1985–1998	Zero-inflated negative binomial regression	Economic Openness (−), International Disputes (+), Population Density (+)
Dreher & Fischer, 2010	109	RAND–MIPT	Number of international incidents	1976–2000	Negative binomial regression	Expenditure Decentralization (−), GDP (+), Population (+), Government Fractionalization (+)
Dreher & Fischer, 2011	110	RAND–MIPT	Number of domestic incidents	1998–2004	Negative binomial regression	Expenditure Decentralization (−), Political Freedom (−)
Elbakidze & Jin, 2012	77	ITERATE	Number of international incidents	1980–2000	Random-effects and fixed-effects Poisson regression	Financial Contribution to UN General Operating Budget (+), GDP (~), Political Freedom (~), Openness to Trade (~)
Enders & Hoover, 2012	122–171	GTD	Number of domestic and international incidents with at least one fatality	1998–2007	Split sample and smooth transition regression	GDP (~), GINI (+)
Eyerman, 1998		ITERATE	Number of international incidents	1968–1986	Negative binomial regression	Democracy (~)
Fahey & LaFree, 2015	101	GTD	Number of domestic and international incidents	1981–2010	Fixed-effects negative binomial regression	Total attacks: Social Disorganization (+), Full Autocracy (−), Full Democracy (+), Physical Integrity (−), GDP (+), Urban (+), Lagged Terrorism (+); transnational attacks: Social Disorganization (+), Full Autocracy (−), Physical Integrity (−), GDP (+), Urban (+), Lagged Terrorism (+); domestic attacks: Social Disorganization (+), Full Autocracy (−), Full Democracy (+), Physical Integrity (−), GDP (+), Population Density (+), Urban (+), Lagged Terrorism (+); fatalities: Social Disorganization (+), Full Autocracy (−), Full Democracy (+), Physical Integrity (−), Population (+), Urban (+), Lagged Terrorism (+)
Freytag, Kruger, Meirrrieks, & Schneider, 2011	110	GTD	Number of total incidents	1971–2007	Negative binomial regression	Consumption (−), Trade Openness (−), Investment (−), GDP (~), Population (+), Democracy (+), Regime Stability (−), Government Size (+), Lagged Terrorism (+)

Table 6.1 (*Continued*)

Name	Sample Size	Terrorism Data	Outcome	Time Period	Analysis	Significant Independent Variables
Gassebner & Luechinger, 2011	NS	GTD; ITERATE, RAND–MIPT	Number of total incidents	1980– most recently available	Extreme bounds analysis; negative binomial estimator	Location countries: Population (+), Physical Integrity Rights (−), Religious Tension (+), Economic Freedom (−), Infant Mortality (−), Ethnic Tension (+), Government Fractionalization (+), Guerilla War (+), Internal War (+), International Internal War (+), Law And Order (−), Military Expenditures (+), Military Personnel (+), OECD (+), Proximity to United States (+), Strikes (+), Urbanization (+), Portfolio Investment (+); victim and location countries: GDP (+), Population (+), Economic Freedom (−), International War (+), Physical Integrity (−), Guerilla War (+), Internal War (+), Telephone (+/−), Centrist Government (+), Ethnic Tensions (+), Military Expenditures (+), OECD (+), Proximity to United States (+), Primary Goods Export (−), Religious Tensions (+), Youth Bulge (−)
Gelfand & LaFree, 2013	21	GTD	Domestic and transnational; fatal attacks; average number of fatalities per attack	1970–2007	Negative binomial regression	Total attacks: Fatalism (+), Gender Egalitarianism (−); fatal attacks: Religiosity (+), Fatalism (+), Gender Egalitarianism (−); average fatalities: Cultural Tightness (+)
Kis-Katos, Liebert, & Schulze, 2011	159	GTD	Number of domestic and international incidents	1970–2007	Fixed-effects negative binomial regression	GDP (+), Political Openness (+), Political Competeness (+), Domestic Conflict (+), Anarchy (+), Regime Transitions (+)
Koch & Cranmer, 2007	68	ITERATE	Number of international incidents	1975–1997	Negative binomial regression	Left (+), Government Fraction (+)
Krueger & Laitin, 2008	138–150	US State Department	Number of international incidents	1997–2007	Negative binomial regression	Population (+), GDP (+/target), Civil Liberties (+/origin and location)

Study	N	Data source	Dependent variable	Years	Method	Findings
Krueger & Maleckova, 2009	143 country pairs	WITS	Number of international incidents	2004–2008	Negative binomial regression	Disapproval Rate (+), Distance (−), Origin Country Population (−), Origin Country Low Civil Liberties (+), Origin Country GDP (−), Origin Country Muslim Population (−), Target Country Population (+), Target Country Low Civil Liberties (−), Target Country GDP (+)
Kurrild-Klitgaard, Justesen, & Klemmensen, 2006	NS	ITERATE	Number of international incidents	1996–2002	Binary logistic regression	Political Rights (~), Civil Liberties (−), Trade (−)
Lai, 2007	185	ITERATE	Number of international incidents	1968–1998	Negative binomial regression with robust standard errors	Civil War (+), Interstate War (+), Population (+), Economic Differences (+), Democracy (+), Anocracy (+), GDP (+), State Sponsor (+)
Li & Schaub, 2004	112	ITERATE	Number of international incidents	1975–1997	Negative binomial regression with robust standard errors	Trade (−), Portfolio (−), GDP (−), Partners GDP (−), Size (+), Democracy (+),
Li, 2005	119	ITERATE	Number of international incidents	1975–1997	Negative binomial regression	Government Capability (+), Lagged Terrorism (+) Democratic Participation (−), Government Constraints (+), Proportional Representation (−)
Meierrieks & Gries, 2012	160	GTD	Number of domestic and international incidents; fatalities	1970–2007	Negative binomial regression	Growth Rate GDP (~), Population (+), GDP (−), Trade Openness (−), Guerilla Warfare (+)
Mullins & Young, 2010	174	GTD	Number of total incidents	1970–1997	Zero-inflated negative binomial regression	Government Terror (+), War (+), Death Penalty (+), Population (+)
Piazza & Walsh, 2010	142	GTD; ITERATE	Number of total incidents; number of international incidents	1981–2004	Negative binomial regression	Physical Integrity Rights (−), Durability (−), Executive Constraints (+), Political Participation (−), Population (+), Civil War (+), GDP (+)
Piazza, 2006	96	US State Department	Number of total incidents; number of casualties	1986–2002	OLS multiple regression	Incidents: Population (+), Repression (+), Number of Political Parties (+), Population*Diversity (+); casualties: Ethno-Religious Diversity (+), Population*Diversity (+), Number of Political Parties (+), Population*Number of Political Parties (+)

(Continued)

Table 6.1 (*Continued*)

Name	Sample Size	Terrorism Data	Outcome	Time Period	Analysis	Significant Independent Variables
Piazza, 2007	19	RAND–MIPT	Number of domestic and international incidents	1972–1997; 1998–2003	Pooled time series; negative binomial regression	Transnational Attacks: Polity (+), Civil Liberties (−), State Failures (+), Population (+), Lagged Terrorism (+) All attacks: State Failures (+), GDP (+). Regime Durability (−)
Piazza, 2008	197	ITERATE	Number of international incidents	1973–2003	Negative binomial regression	Aggregate State Failure (+), Ethnic War (+), Revolutionary War (+), Genocide & Politicide (+), Adverse Regime Change (+), Population (+), HDI (+)
Piazza, 2011	172	GTD	Number of domestic incidents	1970–2006	Zero-inflated negative binomial regression	Minority Economic Discrimination (+), No Minorities at Risk (−), HDI (+), GINI (+), Population (+), Political Participation (−), Executive Constraints (−)
Sanchez-Cuenca, 2009	23	Investigator source	Fatalities	1970–2000	OLS with robust standard errors	Past Dictatorship (+), Population (+), Communist Parties (+)
Savun & Phillips, 2009	158–163	RAND–MIPT	Number of domestic and international incidents	1998–2004; 1968–2001	Zero-inflated negative binomial regression	Domestic: Civil War (+), Income (+), Log Pop (+), Capability (+), Political Discrimination (+), Economic Discrimination (+) and Durability (+); international: Civil War (+), Democracy (+), Executive Constraints (+), Log Pop (+), Durability (+), Capability (+)
Tavares, 2004	NS	ICT	Number of total incidents	1987–2001	OLS panel regression	GDP (+), GDP growth (+), Linguistic Diversity (+), Illiteracy Adult Males (−), Urban Population (+)
Wade & Reiter, 2007	NS	Suicide terrorism data	Number of domestic and international incidents	1980–2003	Negative binomial regression with robust standard errors; rare events logit	Population (+), Lagged Attacks (+)

Study	N	Database	Dependent variable	Years	Method	Findings
Walsh & Piazza, 2010	195	ITERATE; RAND–MIPT	Number of international incidents; number of domestic incidents; number of total incidents	1981–2003; 1998–2004	Negative binomial regression	Physical Integrity Rights (−), Durability (+)
Weinberg & Eubank, 1998	175	RAND	Number of international incidents	1994 and 1995	Chi-squared test	Democracy (+), Political Transitions (+)
Weinberg & Eubank, 2001	175	RAND	Number of international incidents	1994 and 1995	Chi-squared test	Regime Change (+), Democracy (+), FH Democracy (+)
Wiedenhaefer, Dastoor, Balloun, & Sosa-Fey 2007	51	ITERATE	Number of international incidents	1968–1979	Stepwise multiple regression	Population (+), Uncertainty Avoidance (+)
Young & Dugan, 2011	115	GTD	Number of fatal incidents; number of domestic and ambiguous incidents; number of international incidents	1975–1997	Negative binomial regression	Veto (+), Durability (−), War (+), Population (+)

Note: "~" indicates nonlinear effects or effects that vary by country viewpoint. NS = Not Stated.

comparative studies of terrorism. We include only quantitative studies written in English, with a sample of at least 10 that treat country-level terrorism as the major dependent variable and focus on socio-political predictors of terrorism. We searched both disciplinary-specific databases (National Criminal Justice Reference Service, Criminal Justice Abstracts) and general academic databases (Google Scholar, Web of Science) and identified 50 studies examining the correlates, causes, and predictors of country-level terrorism. While we tried to be as inclusive as possible, we do not claim to have successfully captured every single study that fits these criteria. For each study, we include the sample size, data source, main outcome variables, time period analyzed, methods, and significant independent variables. For convenience, we organize the studies in alphabetical order by the authors' last names.

The most commonly used databases in our review of cross-national studies of terrorism were ITERATE (19 studies), GTD (15 studies), and RAND–MIPT (10 studies). Sources that appear less frequently include the US State Department, the Global Terrorism Index (GTI), data from the International Policy Institute for Counter Terrorism (ICT), and the Worldwide Incident Tracking System (WITS). As noted earlier, the choice of data affects the main outcome variable: for example, studies based on ITERATE or RAND prior to 1998 are focused on international attacks, while those based on GTD and RAND–MIPT include both international and domestic attacks.

Perhaps the single-most striking feature of Table 6.1 is how recent most of the cross-national quantitative studies of terrorism are. Thus, the oldest studies included (Eyerman, 1998; Weinberg & Eubank, 1998) date back to only 1998, and, somewhat remarkably, 47 of the studies (94%) were published after 2001. In general, the fact that most studies are recent is attributable to simple data availability: several of the most commonly analyzed databases (GTD, RAND–MIPT) have only been available in recent years. In contrast to studies of homicide (for reviews, see LaFree, 1999; Nivette, 2011), note also that the majority of the published studies on terrorism include relatively long time series. Many of the studies begin in the late 1960s and early 1970s and end after 2000. Also in contrast to most cross-national comparative studies of homicide, many of the terrorism studies include large samples of countries. For example, Mullins and Young (2012) include 174 countries, while Piazza (2011) includes 175. Most cross-national studies of homicide include a maximum of 40–50 countries and almost entirely exclude countries from major world regions such as Africa and Asia.

Another interesting feature of the recent literature on cross-national terrorism is its methodological sophistication. For example, if we compare the results in Table 6.1 to summaries of cross-national research on homicide (again, see LaFree, 1999; Nivette, 2011), the former have used more sophisticated quantitative methods than the latter. For example, while the majority of studies reviewed by LaFree (1999) used either bivariate or OLS regression, studies included in Table 6.1 use statistical methods such as zero-inflated negative binomial panel regression and binary logistic regression. These differences likely reflect the fact that, compared with the homicide studies, many of the terrorism studies are more recent and have focused on estimating terrorism counts over time. Focusing on longitudinal data allows for larger sample sizes (country–year observations) and makes it more defensible to employ sophisticated statistical methods.

As can be quickly observed in Table 6.1, there is a wide range of statistically significant independent variables. In the next three sections, we group the significant findings into economic, political, and demographic categories.

Economic Variables

Economic Development and Economic Inequality   There are several common theoretical expectations about the effect of economic variables on cross-national comparative terrorism (Blomberg et al., 2004; Tavares, 2004; Abadie, 2006; Bravo & Dias, 2006; Kurrild-Klitgaard et al., 2006; Piazza, 2006; Krueger & Laitin, 2008). Perhaps the most popular economic prediction is that economic underdevelopment is a root cause of cross-national rates of terrorism (Krueger & Maleckova, 2003; Piazza, 2006; Sandler, 2014). Those countries with high levels of economic development should be less likely to produce and experience terrorist activity. By contrast, others (Blomberg et al., 2004; Mullins & Young, 2012) have argued that countries with high levels of economic development may be targeted by terrorist activity because they have stronger governments and state capacity, making outright political challenges less likely, and thus encouraging terrorist activities. Additionally, economically developed countries also provide more targets, and typically are characterized by infrastructures that are conducive to mass causalities, as well as media that are able to widely report such attacks (Ross, 1993; Piazza, 2011). Whereas measures of economic development are primarily focused on examining absolute deprivation, many have argued that relative deprivation within countries may also influence country-level terrorism.

As in the case of cross-national homicide literature, others have argued that relative deprivation in the form of economic inequality or economic grievances can increase the probability of country-level terrorism (Gurr, 1970; Lai, 2007). The underlying argument is that terrorism is generally undertaken by marginalized individuals with few resources, and thus terrorism becomes a rational course of action (Li, 2005; Koch & Cranmer, 2007; Piazza, 2011). In a related vein, many scholars argue that "social safety nets" such as social welfare expenditures may lessen the effects of economic deprivation and grievances, thereby reducing country-level terrorism (Burgoon, 2006; Gassebner & Luechinger, 2011:238). Generally speaking, theoretical arguments guiding the expectations of economic deprivation and inequality are more consistent than those for economic development.

As can be seen in Table 6.1, a number of measures have been used to capture country-level economic development and economic deprivation. Measures of overall economic development have included gross domestic product (GDP), the Human Development Index (HDI), levels of consumption, and trade openness and investment. Common measures of economic deprivation include grievances due to declines in economic growth (GDP growth) and income inequality (GINI index). Studies have also included measures reflecting country-level social welfare policies (Burgoon, 2006), economic regulations (Kurrild-Klitgaard et al., 2006), and foreign aid and globalization (Li & Schaub, 2004; Azam & Delacroix, 2006; Azam & Thelen, 2008).

GDP is the most widely used measure of overall economic development and has arguably produced the most conflicted findings (Gassebner & Luechinger, 2011). For example, many studies have reported null effects for GDP on country-level terrorism (Abadie, 2006; Piazza, 2006; Gelfand, LaFree, Fahey, & Feinberg, 2013). Abadie (2006) examined the impact of both economic development (GDP) and income inequality on terrorism risk (Global Terrorism Index) for 186 countries and was unable to detect a significant relationship. Similarly, Piazza (2006) used data from the US State Department to analyze the probability of being the victim of a terrorist attack for 96 countries between 1986 and 2002. Piazza included several economic variables, including HDI, GDP growth, inflation, unemployment, and calories per capita. His results supported Abadie's (2006) results for

terrorism risk: economic development and income inequality (GINI index) were not significantly related to the probability of experiencing terrorist attacks. Similarly, he did not find support for Gurr's (1970) relative deprivation argument that economic inequality (again using the GINI index) was related to increased terrorism attacks. Although more recent studies (Caruso & Schneider, 2011; Coggins, 2015) have found evidence for the effect of economic variables on terrorism, the direction and nature of these relationships vary substantially across studies.

A number of studies have reported a significant positive relationship between economic variables and terrorism (Blomberg et al., 2004, Blomberg & Hess, 2008a, b; Krueger & Laitin, 2008). Using data from ITERATE for 127 countries between 1968 and 1991, Blomberg et al. (2004) reported that high-income democratic countries had higher incidences of terrorist activity. Using US State Department data, Krueger and Laitin (2008) found similar results: economic development is positively associated with experiencing terrorist attacks. Note that the aforementioned studies all used datasets that focus almost exclusively on international terrorism attacks. Other researchers (Savun & Phillips, 2009; Freytag et al., 2011) have argued that null or positive findings found in most examinations of international terrorism may not reflect the effect of economic development on terrorism more generally because international terrorism, as compared with domestic, is typically driven by global political conditions and issues. However, Piazza (2011) examined domestic terrorism using data from the Global Terrorism Database (GTD) and found a positive association between gross national income per capita (GNI) and domestic terrorism for 172 countries between 1970 and 2006. Unlike his previous study (2006) using State Department data, Piazza found that both income inequality and minority group economic discrimination were related to increased domestic terrorism. Thus, several studies examining the impact of economic development on terrorism have reported no relationship or higher rates of terrorism in more economically developed countries (Gassebner & Luechinger, 2011; Freytag et al., 2011).

Nonetheless, several studies have also indicated that economic development may have negative or curvilinear effects on country-level terrorism (Li & Schaub, 2004; Bravo & Dias, 2006). Li and colleagues (Li & Schaub, 2004; Li, 2005) used ITERATE data and reported a negative relationship between economic variables and international terrorism. Specifically, Li and Schaub (2004) examined 112 countries from 1975 to 1997 and reported that a 1% increase in GDP per capita significantly reduced international terrorist attacks. Consistent with Piazza (2011)'s findings for economic deprivation, they report a positive relationship between income inequality and terrorism. Perhaps more importantly, they provide a possible explanation for the contradictory findings on economic development and terrorism across countries. They examined the possibility that economic development has different effects for developed and developing countries by including an interaction term that captured membership in the Organization of Economic Cooperation and Development (OECD) and overall economic development. Their results indicate that the negative relationship between economic development and terrorism is stronger among OECD countries.

Freytag and colleagues (2011) also found that higher levels of economic development are associated with fewer domestic and international terrorist attacks. Using data from the GTD for 110 countries between 1971 and 2007, they found that higher levels of consumption, trade openness, and investment were associated with declines in terrorist attacks. They also report that economic development is associated with increased terrorist attacks until a certain level of development is reached, but not after that level. Caruso and Schneider

(2011) used data from the GTD to examine predictors of terrorism for 12 West European countries between 1994 and 2007. Results from their panel analysis indicate that increases in GDP are related to decreases in terrorist activity; however, future economic growth is associated with increases in terrorist activity. Other scholars (Lai, 2007; Enders & Hoover, 2012; Elbakidze & Jin, 2012; Boehmer & Daube, 2013) have also found evidence for more nuanced effects of economic development in the form of non-linear effects on terrorism.

The mixed and often contradictory results are likely a result of many factors, including: variation in the outcome (international or domestic terrorism), differing measures of country-level terrorism based on the origins of attacks, perpetrator groups or targets, different datasets and samples analyzed, variation in control variables included in models, and potential non-linear effects of predictor variables (Krieger & Meierrieks, 2011; Sandler, 2014). Gassebner and Luechinger (2011) attempt to shed light on the relationship between several variables related to terrorism by applying extreme bounds analysis (EBA) to terrorism outcomes from three different databases—ITERATE, GTD, and RAND–MIPT. Additionally, they focus on three different measures of country-level terrorism—the country in which the terrorist attack occurred (venue or location country), the country location of the target, and that of the perpetrator. Unsurprisingly, they found that most predictors of terrorism varied by the country-level measure of terrorism examined, as well as the dataset. However, several consistent findings related to economic measures emerged, including positive effects for economic freedom and infant mortality.

For both ITERATE and the GTD, those countries with more economic freedom and less economic restrictions were less likely to experience terrorist attacks. For victim and perpetrator countries, economic freedom was also negatively associated with terrorism. GDP, however, was only significantly related to the probability of attacks for terrorism targets and only when using the GTD. They conclude that economic measures such as GDP are less important for predicting terrorism across countries, but it is important to note that they did not examine potential non-linear effects of predictor variables on terrorism (Enders & Hoover, 2012).

In general then, prior research on economic development and terrorism has been contradictory, with variation noted especially depending on the data examined (domestic vs. international), model specification (linear vs. non-linear), and whether the focus is on location, perpetrators, or targets. There is more promising evidence indicating that economic underdevelopment may influence the production of terrorist activity by providing a fertile ground for the development of terrorist groups, and less support for the argument that economic underdevelopment is related to higher probability of experiencing a terrorist attack (Azam & Thelen, 2008; Piazza, 2011; Gassebner & Luechinger, 2011). Other measures related to economic development, such as economic freedom and human development, are related to less country-level terrorism. More recent research has also indicated that economic development may have non-linear effects and vary according to location, perpetrators, and targets (Freytag et al., 2011; Enders & Hoover, 2012). Finally, there is substantial evidence that economic deprivation and inequality is significantly related to increased country-level terrorism.

Political Variables

Several prominent explanations of country-level terrorism activity center on elements of the country's political system or governance. According to Table 6.1, two of the most important political variables included in past cross-national comparative studies of terrorism are

strength of democracy and state failure. In the next two sections, we briefly review theoretical explanations and the empirical evidence on the effects of political factors such as regime type, strength of democracy, and failed states on terrorism.

Strength of Democracy   The relationship between the strength of country-level measures of democratic institutions and terrorism has generated considerable amount of interest from terrorism researchers (Crenshaw, 1981; Sandler, 1995; Sandler, 2014). In fact, many researchers have argued that terrorism is more strongly and consistently associated with political than economic measures (Tavares, 2004; Piazza, 2008; Savun & Phillips, 2009; Freytag et al., 2011; Sandler, 2014). Two rival arguments exist about the effects of strength of democracy on terrorism. Many have stated that democratic countries may be associated with less terrorism because democratic governments offer many avenues for the citizenry to address grievances while also encouraging non-violent, peaceful means of resolving conflict (Schmid, 1992; Li, 2005; Gassebner & Luechinger, 2011). For example, Crenshaw (1981) argues that democratic societies are characterized by open elections that allow citizens to influence social and political changes and allows for the expression of competing policy preferences (see also Schmid, 1992; Ross, 1993).

However, others have argued that certain components of democratic societies may also increase country-level terrorism. Li (2005) and others (Freytag et al., 2011) claim that the freedom of speech and civil liberties enjoyed by citizens of democratic countries facilitate terrorism by making it easier for terrorist organizations to mobilize and harder for governments to counter terrorist attacks without violating civil liberties of citizens. Li claims that, compared with autocratic societies, democratic societies are characterized by greater press freedom and fewer political restrictions on reporting terrorist attacks, both of which are conducive to terrorist mobilization and activity. Moreover, Li also argues that certain elements of democracy may impact terrorism in opposite directions. For example, he hypothesizes that institutional constraints are positively related to terrorism, whereas democratic participation is negatively related to terrorism. Countries in which there are many institutional constraints on policymaking can experience political deadlock, which in turn can enhance grievances of marginalized segments of the population leading them to resort to political violence. Institutional constraints may also increase terrorism in democratic countries because they make it difficult to enact strict counterterrorism policies as is often done in more repressive regimes (Crenshaw, 1981; Li, 2005). However, as noted by Crenshaw (1981), democratic participation may reduce the probability of terrorist activity because open access to political participation reduces political grievances among dissenters and offers them legitimate avenues for voicing concerns or seeking political redress (Li, 2005).

Finally, Li (2005) notes that variation in the implementation of democracy may be important. For example, compared with majoritarian systems, participatory proportional systems may be associated with less terrorism because they are more inclusive, more closely represent public preferences for policies, and are therefore better able to address political grievances, Empirical studies have produced mixed results according to the type of democracy measure used, the outcome studied, and whether the focus is the location, perpetrators, or targets of terrorism.

The primary approaches to measuring the effects of democracy and various aspects of democracy has been to use variables that reflect either a global, composite democracy scale that combines several aspects of regime type or to disaggregate into separate variables. Examples of composite democracy scales include those from Polity IV or Gate's Scalar measure, and measures that classify countries as either democratic vs. autocratic or

along a continuum (e.g., stable democracies, insecure democracies, partial democracies, limited authoritarian, absolutisms).

Studies using composite measures show that democratic countries, as compared with autocratic, have more terrorist groups and more terrorist attacks and fatalities (Eubank & Weinberg, 1994, Weinberg & Eubank, 1998; Li & Schaub, 2004; Blomberg & Hess, 2008a; Campos & Gassebner, 2013). Weinberg and Eubank (1998) examined the influence of regime type (democracy, insecure democracy, partial democracy, limited authoritarianism, and absolutism) and regime change (transition toward and away from democracy) on international terrorism event data taken from RAND and the US State Department. Their results were in line with previous work (Eubank & Weinberg, 1994) which indicated that more democratic countries were likely to have a larger number of terrorist groups and a higher probability of experiencing attacks. Additionally, regime changes were associated with a greater probability of experiencing terrorist attacks. Subsequent work by Eubank and Weinberg (2001) further supports their findings that democracy is a predictor of international terrorism for the location of attacks and the nationality of perpetrators and targets. Although certainly a contribution to the literature, the authors did not include controls for other predictors of terrorism and only examined data for 1994 and 1995.

Using longitudinal data for 112 countries (1975–1997; ITERATE), Li and Schaub (2004) employed a multivariate approach that controlled for several predictors of terrorism. Their results indicated that democracy was consistently and positively associated with the country-level location of international terrorism across all model specifications. Blomberg and Hess (2008a, b) also used the ITERATE data and found similar results for the location of terrorism in 179 countries between 1968 and 2003.

However, Eyerman (1998) also used data from ITERATE but reported curvilinear effects for democracy and international terrorism. Whereas established democratic countries were associated with fewer terrorist attacks, countries that recently transitioned to democracy had the most terrorist attacks. Indeed, several studies have indicated that regime durability, measured as the number of years since the most recent regime change, is negatively related to terrorism (Weinberg & Eubank, 1998; Eyerman, 1998; Abadie, 2006; Li, 2005; Piazza, 2007, 2008; Young & Dugan, 2011).

Several studies have also examined the effects of specific aspects of democratic institutions on terrorism, including democratic participation, civil liberties, political rights, participatory proportional systems, institutional constraints, government decentralization, physical integrity and human rights, intergroup competition, and the presence of veto players (Li, 2005; Abadie, 2006; Piazza, 2008; Krueger & Laitin, 2008; Savun & Phillips, 2009; Dreher & Fischer, 2011; Young & Dugan, 2011; Campos & Gassebner, 2013). Li (2005) examined terrorism for 119 countries between 1975 and 1997 using data from ITERATE while also controlling for other relevant socio-political and demographic variables. Results from negative binomial regressions indicate that, while democratic participation and participatory proportional systems are negatively related to transnational terrorist activity for location countries, institutional constraints are associated with increases in terrorist attacks.

Piazza (2008) also provides supporting evidence that executive constraints and democratic participation are significantly related to the location of terrorism and the nationality of perpetrators in 197 countries from 1973 to 2003 (ITERATE). For the location of terrorism, a greater degree of executive constraints is associated with more terrorist attacks. For the nationality of perpetrators, executive constraints and participation are negatively related to the nationality of perpetrators for international terrorism.

Evidence also suggests that civil liberties are significantly related to an increased probability that a country will be the location for both perpetrators and targets of terrorist activity (Li, 2005; Danzell & Zidek, 2013). Using the GTD, Danzell and Zidek found that civil liberties were positively associated with both domestic and international terrorism for 34 countries between 2000 and 2009. However, Krueger and Laitin (2008) examined the effects of a country's civil liberties on the location of terrorism and the nationalities of perpetrators and targets for over 100 countries between 1972 and 2002, and found that countries with fewer civil liberties experienced more international attacks and were the locations for larger numbers of terrorist perpetrators. Kurrild-Klitgaard and colleagues (2006) examined political and civil liberties and found both to be negatively related to international terrorism of origin countries.

There is much support for the relationship between government violation of human rights or physical integrity and terrorism (Walsh & Piazza, 2010; Piazza & Walsh, 2010; Mullins & Young, 2012). Walsh and Piazza (2010) used data from both RAND–MIPT and ITERATE for 195 countries (1998–2004) to examine the extent to which violation of physical integrity rights are related to terrorism. Physical integrity rights are defined as rules that protect citizens from extrajudicial murder, disappearance, torture, or political imprisonment by government authorities. Their results indicate that increased government protection of physical integrity rights decreases both domestic and international terrorism. Using data from the GTD, Piazza and Walsh report similar effects for physical integrity rights on terrorism using both aggregated and disaggregated measures of physical integrity rights. Physical integrity rights also emerge as a robust predictor of terrorism in Gassebner and Luechinger's (2011) analysis of three different datasets for the location of attacks and for the nationalities of perpetrators and targets.

Although the majority of studies have focused on international terrorism, recent research has also examined the impact of political variables on domestic terrorism (Savun & Phillips, 2009; Young & Dugan, 2011). For example, using data taken from the GTD, Young and Dugan (2011) find that the presence of veto players—organizations or groups that have the ability to prevent policy changes—has a significant positive impact on domestic terrorist and fatal terrorist attacks. The extent to which there is intergroup competition in democracies has also been linked to the probability of international terrorist attacks. Using data from ITERATE for 119 countries between 1975 and 1997, Chenoweth (2010) finds that intergroup competition is associated with increased international terrorist attacks.

In sum, several studies have found that democratic countries, measured either as a composite scale or as components of democracy, are more likely to be targets of international terrorism, yet there is also evidence that democracy is negatively related to international terrorism of perpetrator countries (Weinberg & Eubank, 1998; Piazza, 2008; Eubank & Weinberg, 2001; Li & Schaub, 2004; Sandler, 2014; Gassebner & Luechinger, 2011). Additionally, disaggregated components of democracy measures may operate in different directions or operate in a curvilinear fashion, thus suggesting that future studies should examine the multifaceted aspects of regime type on country-level terrorism (Li, 2005; Eyerman, 1998). Finally, several studies have found that countries with governments that respect physical integrity rights are associated with fewer terrorist attacks, across all three measures of country-level terrorism.

Failed States   Much more agreement exists about theoretical expectations and empirical evidence for the effects of failed states on terrorism. Many have argued that weak or failed states are likely to have large numbers of terrorist groups, and are likely to be targeted for

attacks (Newman, 2007; Piazza, 2008; Tikuisis, 2009; Freytag et al., 2011; Kis-Katos et al., 2011). Failed states may encourage international terrorism because they lack the ability to prevent terrorist attacks and because they also are conducive to terrorist group mobilization. Prior measures of state failure have included political instability; involvement in state, civil, and ethnic wars; international conflict; genocide; and military conflicts.

A number of empirical studies indicate that state failure is significantly related to international and domestic terrorism (Lai, 2007; Piazza, 2007, 2008; Choi & Luo, 2013; Coggins, 2015; Fahey & LaFree, 2015). Piazza (2007) used data from the RAND–MIPT database to examine terrorism attacks for 19 Middle Eastern countries. State failure is measured as a composite variable capturing ethnic wars, revolutionary wars, genocides, politicides, and adverse regime changes. His results indicate that the intensity of state failure is a strong predictor of being a target and an origin country of international and domestic terrorism. Piazza (2008) replicates these findings using the ITERATE database to examine the relationship between failed states and the average number of terrorist attacks in location and perpetrator origin countries for 197 countries from 1973 to 2003. He uses both an aggregated and disaggregated measure of failed states. Results for both measures indicate that failed states increase the probability for international terrorism for location and perpetrator countries.

More recently, Coggins (2015) has argued that many of the prior studies on state failure and terrorism may be misleading because of endogeneity between the independent and outcome variables. Coggins notes that many measures of state failure are endogenous with terrorism, such as guerilla warfare and civil, ethnic, or revolutionary wars, and conceptualizes state failure as human security (infant mortality, GDP, and the HDI); state capacity (government effectiveness, rule of law, control of corruption); and political collapse. Using RAND–MIPT data for 153 countries between 1999 and 2008, Coggins concludes that there is little support for the notion that failing or failed states are related to terrorism for location or perpetrator countries. However, she does find evidence that location and perpetrator countries at war or those that have experienced political collapse are indeed more likely to experience increased terrorism. In particular, she argues that states that have experienced violent political instability or emergent anarchy have more terrorist groups and terrorism. Substantive findings remain after controlling for relevant socio-political variables and participation in civil and international wars. It is important to note that some of her measures of state failure are also commonly used as economic variables.

In general, some political measures appear to be positively associated with measures of terrorism, while others have had negative effects. In particular, variables related to regime type, such as strength of democracy, have been positively associated with country-level terrorism for the location of attacks and the nationality of perpetrators and targets. However, other studies have indicated that democracy has a non-linear effect on terrorism activity, with recently transitioned democracies at a higher risk of terrorism activity as compared with more established democracies or autocracies. Results showing a negative effect of regime durability on terrorism can be viewed as support for the conclusion that democracy has curvilinear effects on terrorism activity.

Perhaps there is more consistent and stronger evidence for the effects of failed states on terrorism activity. Numerous studies have reported that various measures of state failure are related to country-level terrorism rates. Generally, the literature has indicated that international disputes, ethnic or civil war, guerilla warfare, international or interstate internal war, genocide and riots (Drakos & Gofas, 2006b; Lai, 2007; Piazza, 2007, 2008; Campos & Gassebner, 2013; Piazza & Walsh, 2010; Mullins & Young, 2012), adverse regimes changes,

political collapse, or anarchy (Piazza, 2008; Kis-Katos et al., 2011; Coggins 2015; Fahey & LaFree, 2015) are related to increased domestic and international terrorism. Gassebner and Luechinger (2011) also report that international internal war is a robust predictor of the nationality of terrorist perpetrators and targets using data from both ITERATE and GTD.

Demographic Variables

Major demographic variables linked to terrorism in prior research include total population, urbanization, and ethnic/linguistic fractionalization. Population may be related to terrorism simply because a large population offers more opportunities for terrorist perpetrators. Additionally, larger populations are more difficult for the state to monitor (Lai, 2007). Several studies have indicated that countries with a large population are significantly more likely to experience terrorism (Burgoon, 2006; Piazza, 2007; Lai, 2007; Wade & Reiter, 2007; Wiedenhaefer et al., 2007; Krueger & Laitin, 2008; Sanchez-Cuenca, 2009; Gassebner & Luechinger, 2011; Coggins, 2015; Fahey & LaFree, 2015). For example, Gassebner and Luechinger (2011) found that population is associated with higher numbers of terrorist attacks and targets but not a higher number of terrorist perpetrators. By contrast, Piazza (2008) found that population is associated with a higher number of perpetrators as well as total attacks. Other studies have reported that population growth and the size of the youth population are significantly linked to higher numbers of terrorist attacks (Tavares, 2004; Dreher & Fischer, 2010).

Arguments underlying the expected relationship between urbanization and terrorism are closely related to arguments about the influence of large populations on terrorism. Urbanization may influence terrorism because terrorists seek to cause mass casualities and urban areas have large populations and many suitable targets. Several studies have found that urbanization is significantly related to increased terrorism for the location of attacks and for attack targets (Tavares, 2004; Gassebner & Luechinger, 2011; Danzell & Zidek, 2013; Fahey & LaFree, 2015).

The extent to which ethnic, linguistic, or religious tension or conflict exists in a country may also influence the frequency of terrorism. However, the evidence for a relationship between ethnic/linguistic/religious fractionalization and terrorism is not strong, with findings ranging from weakly positive to null (Abadie, 2006; Kurrild-Klitgaard et al., 2006; Gassebner & Luechinger, 2011). Although Basuchoudhary and Shugart (2010) initially found a positive relationship between high ethnic tensions and terrorism, the relationship is not significant once economic freedom is taken into account. Gassebner and Luechinger's examination of predictors of terrorism across three different databases found that the effects of ethnic tension were significant for location of attacks and targets, but only using the GTD. On the other hand, they found that the lack of religious tension is a robust predictor of terrorism for attack location using all three databases (ITERATE, GTD, and RAND–MIPT).

Conclusions

Driven by rising interest in terrorism and the increasing availability of open-source worldwide databases, there has been a rapid growth in cross-national comparative studies of terrorism. Although the research clearly indicates that the predictors of terrorist attacks vary substantially across studies, as Krieger and Meierrieks (2011) note, the sometimes

conflicting results may be due to the use of different methodologies, time frames, variables, and databases. Nonetheless, there are a few consistent patterns worth emphasizing. First, cross-national comparative studies have found significant effects for several economic variables (especially economic development, economic inequality) and several political variables (especially democratization, failed states, physical integrity rights; Abadie, 2006; Li, 2005; Piazza, 2007, 2008, 2011; Piazza & Walsh, 2010, Mullins & Young, 2012; Freytag et al., 2011; Sandler, 2014).

Second, findings are more complex when researchers focus on either international or domestic attacks or on the country where the attack took place versus the nationality of perpetrators and targets. Although several researchers have attempted to consider these complexities (Piazza & Walsh, 2010; Gassebner & Luechinger, 2011; LaFree, Dugan, & Miller, 2015), future research should pay more attention to the linear and non-linear effects of key variables for the country-level location of attacks and the nationality of perpetrators and targets. Indeed, it may not be reasonable to expect that economic, political, and demographic variables will operate in a similar fashion across locations, perpetrators, and targets.

Third, little attention has been paid to examining the specific countries that are used across the extant studies. Recent terrorism research has undoubtedly benefited from the use of larger, more varied samples of countries, including both industrializing and industrialized countries. However, many of the existing studies devote little time to describing the actual sample of countries or potential differences in country-level quality of data, and instead focus almost exclusively on a variable-oriented approach. In this regard, future research may benefit from taking a more qualitative, contextual approach to examining the predictors of country-level terrorism for the location of attacks and the nationalities of perpetrators and targets.

Finally, prior country-level terrorism research has highlighted the complexities of distinguishing between domestic and international sources of terrorist attacks in cross-national comparative analyses. Because early open-source databases on terrorism were limited to international attacks, cross-national comparative research that includes both international and domestic attacks has been recent. Distinguishing between international and domestic attacks is complicated with open-source data especially because, in many cases, the nationality of the perpetrator is unknown (LaFree et al., 2015). Nonetheless, more research distinguishing these categories in theoretically and empirically meaningful ways would be useful.

Cross-national comparative studies of terrorism are barely two decades old and yet have generated a surprising amount of research. Compared with cross-national studies of homicide, studies of terrorism include a broader sample of countries, longer time frames, and more sophisticated quantitative analysis. In this sense at least, terrorism, a relatively new specialization within criminology, may provide some lessons for the cross-national comparative study of more ordinary types of crime.

Note

1   We use the term "domestic" to refer to terrorist attacks where the country location and the nationalities of the perpetrators and targets of the attack are all the same. For example, an attack in the United States by a terrorist organization based in the United States on a US target is a domestic attack; if any of these three elements is not United States–based, we consider it an "international" attack.

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Part III

Theories

General Strain Theory and Terrorism

Robert Agnew

General strain theory (GST) states that a range of strains or stressors contribute to crime, including strains involving the presentation of negative stimuli (e.g., verbal and physical abuse), the loss of positive stimuli (e.g., the death of friends and family), and the inability to achieve valued goals (e.g., monetary, status, and masculinity goals). These strains lead to negative emotions, such as anger and frustration. Such emotions create pressure for corrective action, and crime is one way to cope. Crime may be used to reduce or escape from strains (e.g., theft to obtain money, running away from abusive parents), obtain revenge against the source of strain or related targets, and alleviate the negative emotions associated with strain (e.g., illicit drug use). Whether individuals cope with strains through crime, however, is said to depend on their ability to cope in a legal as well as criminal manner, the costs of criminal coping, and their disposition for criminal coping (Agnew, 2006). The first section of this chapter provides an overview of GST.

GST has been applied mainly to street crimes, particularly acts of interpersonal violence, theft, and drug use and sales (although see Agnew, 2010; Rice, 2009). However, as briefly described in the second section of this chapter, researchers outside criminology commonly explain terrorism in terms of strains such as material deprivation, religious conflict, and harsh state repression. These explanations, however, have not received much empirical support (see Agnew, 2010, and LaFree & Ackerman, 2009, for overviews). Most studies, for example, suggest that there is little relationship between material deprivation and terrorism. Agnew (2010) argues that this is because existing strain explanations suffer from three problems: they fail to specify the key characteristics of those strains most likely to result in terrorism, they do not fully describe why these strains result in terrorism, and they do not explain why only a small portion of those experiencing the strains respond with terrorism.

Agnew (2010) draws on GST and the terrorism literature to address these problems. His general strain theory of terrorism (GSTT) is described in the remainder of this chapter. In brief, the GSTT states that terrorism is more likely when individuals experience "collective strains" that are: (a) high in magnitude, with civilians affected; (b) perceived as unjust; and (c) inflicted by substantially more powerful others, including "complicit" civilians, with whom members of the strained group have weak ties. These collective strains increase the

likelihood of terrorism because they increase negative emotions, reduce certain social and self-controls, reduce the ability to cope through legal and military channels, foster the social learning of terrorism, strengthen group ties, and contribute to the formation of terrorist groups. The effect of these strains on terrorism, however, is conditioned by several factors, including ties to the collectivity; the experience of certain individual strains; coping skills and resources; coping opportunities; social supports; controls; individual traits; association with terrorists; beliefs related to terrorism; and the anticipated costs and benefits of terrorism.

An Overview of GST

The Characteristics of Criminogenic Strains

GST focuses on a broad range of strains, with strains being defined as events and conditions that are disliked by individuals (Agnew, 2006). Those strains most likely to result in crime are high in magnitude (severe, frequent, of long duration, and involving threats to core goals, needs, values, and identities). Criminogenic strains are also perceived as unjust, involving the voluntary and intentional violation of relevant justice norms. They are associated with low social control, including direct control, bonds to conventional others, and stake in conformity. For example, the strain involving chronic unemployment is associated with a low stake in conformity, while the strain involving the long working hours of many professionals is associated with a high stake. And criminogenic strains create some pressure or incentive for criminal coping. In particular, these strains are readily resolved through crime and/or involve exposure to others who model crime, reinforce crime, and teach beliefs favorable to crime. For example, the strain involving the desperate need for money is readily resolved through crime, while the strain involving the care of a chronically ill family member is not.

Criminogenic strains include parental rejection; harsh, excessive, and/or erratic discipline; child abuse and neglect; negative school experiences (school failure, poor relations with teachers, peer abuse); work in the secondary labor market (poorly paid jobs with few benefits, unpleasant working conditions, coercive control); chronic unemployment; marital problems (e.g., abuse, frequent conflict); criminal victimization; residence in economically deprived communities that suffer from problems such as crime, incivilities, and inferior schools; homelessness; discrimination; and the failure to achieve economic, status, autonomy, and certain other goals. These strains are all related to crime, with strains such as parental rejection and victimization being among the leading causes of crime (Agnew, 2006).

GST makes a distinction between objective and subjective strains. Objective strains refer to events and conditions that are disliked by most individuals in a given society, while subjective strains refer to events and conditions that are disliked by the particular person or persons being examined. Individuals sometimes differ in their subjective reaction to the same objective events and conditions. Some individuals, for example, may be greatly disturbed by the criticism of their religion, while others may be only mildly disturbed. In addition, some individuals experience what might be called "imaginary strains"; they dislike "events and conditions" that most reliable sources believe do not exist (more in the following text). GST states that subjective strains should be more strongly related to crime.

GST also distinguishes between personally experienced, anticipated, and vicarious strains. Anticipated strains refer to strains expected in the future, while vicarious strains refer to strains experienced by others around the individual. Personally experienced strains

should be more strongly related to crime, but anticipated and vicarious strains may sometimes result in crime. This is the case when individuals believe that anticipated strains have a high probability of occurring in the near future and they have the characteristics of criminogenic strains (e.g., are high in magnitude and perceived as unjust). And it is the case when vicarious strains involve close others that the individual has some responsibility for protecting and have the characteristics of criminogenic strains. For example, the shooting death of a fellow gang member by those in a rival gang is a vicarious strain that is likely to lead to further crime. The notion of vicarious strains is central to GSTT.

The strains identified by GST have been used to explain street crimes in general and, to a lesser extent, certain other criminal and deviant acts, such as suicide, binge eating, road rage, school shootings, police deviance, and corporate crime (e.g., Agnew, 2006; Agnew et al., 2009; Ellwanger, 2007; Levin & Madfis, 2009). One emerging theme in the research is that certain strains may be more conducive to some crimes than others. Strained individuals engage in crime partly to reduce their strain. And some crimes are more effective than others at reducing particular strains. For example, theft is more effective than fighting at reducing economic strain. We would therefore expect economic strain to be more conducive to income-generating crimes such as theft than to violence. Strained individuals also engage in crime to obtain revenge against the source of their strain or related targets. Strains occurring at school should therefore be more likely to generate school crime, such as disruptive behavior in the classroom and school vandalism. Those occurring at home should be more likely to generate family crime, such as parental assault and running away. There is some support for these arguments (e.g., Agnew, 2006; Agnew et al., 2009; DeCoster & Kort-Butler, 2006), and the idea that certain strains are especially conducive to particular crimes is at the heart of GSTT.

Why Criminogenic Strains Increase the Likelihood of Crime

GST states that strains lead to a range of negative emotions, such as anger, frustration, and depression. These emotions create pressure for corrective action and, as suggested, crime is one method of coping. Anger occupies a central place in GST, since it is said to be especially conducive to criminal coping. Anger energizes the individual for action, creates a desire for revenge, reduces concern with the consequences of one's behavior, and undermines the inclination and ability to engage in legal coping strategies such as negotiation. Research indicates that anger and other negative emotions partly explain the effect of strains on crime (Agnew, 2006). And, as indicated in the following text, anger plays a central role in GSTT (also see Rice, 2009; Rice & Agnew, 2013). GST also states that strains increase crime by reducing social control, fostering beliefs favorable to crime, promoting association with criminal peers, and contributing to traits conducive to crime, such as low self-control and irritability. These arguments have also received some support, and they likewise play a prominent role in GSTT (Agnew, 2006).

Factors Increasing the Likelihood of Criminal Coping

Finally, GST states that, while strains increase the likelihood of crime, people usually do not cope with strains in a criminal manner. Rather, they employ various methods of legal coping, or they simply endure their strains. Whether individuals cope through crime is

influenced by a range of factors. Criminal coping is most likely among those with poor coping skills and resources, low levels of conventional social support, low social control, the ability to engage in criminal coping, criminal associates, beliefs favorable to criminal coping, and exposure to situations where the costs of criminal coping are low and the benefits are high. Research suggests that criminal coping is more likely when individuals possess *several* of these factors (Agnew, 2013). The description of those factors that influence or condition the response to strains is especially important in the case of terrorism. Even though the experience of certain strains plays a central role in the explanation of terrorism, it is still the case that the large majority of people experiencing these strains do *not* cope through terrorism.

Strain in Current Explanations of Terrorism

Most terrorism research has *no*t been conducted by criminologists, and so does not draw on GST. Nevertheless, strains or stressors are commonly used to explain terrorism (see Agnew, 2010; LaFree & Ackerman, 2009; McAllister & Schmid, 2011, for overviews). These strains include absolute and relative material deprivation; territorial, ethnic, and religious disputes; threats to religious dominance and traditional family roles associated with modernization/globalization; resentment over the cultural, economic, and military domination from the West, especially the United States; the problems encountered by certain immigrant groups, including Muslims in Western countries; harsh state repression, including violence directed at certain groups; a range of human rights violations, including the denial of civil and political rights; military occupation; severe challenges to group identity; religious and ethnic discrimination; and displacement or the loss of one's homeland. Further, terrorists themselves often explain their actions in terms of the strains they face. In fact, the names of terrorist organizations often reflect the centrality of strain, as in the "Organization for the Oppressed on Earth." Likewise, political figures often explain terrorism in terms of strain, such as when President George W. Bush stated: "We fight against poverty because hope is an answer to terror" (Piazza, 2006:160).

   Some of the academic research suggests that strains contribute to terrorism. This is especially true of case studies of terrorist groups. Such studies typically conclude that strains played a key role in prompting the terrorism of the group in question (Agnew, 2010). However, it is possible that others experienced similar strains and did not respond with terrorism. A number of quantitative studies have investigated this issue, and such studies provide weak or mixed support for strain explanations. Research has focused on the relationship between material deprivation and terrorism, and both individual and macro-level studies suggest that the relationship is weak at best (for overviews, see Agnew, 2010; LaFree & Ackerman, 2009; LaFree & Bersani, 2014; McAllister & Schmid, 2011; Piazza, 2006; for an exception involving Far Right terrorists in the United States, see Gruenewald, Chermack, & Freilich, 2013). Poor individuals are not more likely to engage in terrorism; in fact, they are less likely to engage in terrorism in some areas. And measures of material deprivation are unrelated or weakly related to the number of terrorist acts that take place in or originate in a country. More research is needed here, including research on strains other than material deprivation. However, Agnew (2010) argues that the weak support for strain explanations of terrorism at least partly stems from the fact that most such explanations are overly simplistic, and he draws on GST to better describe the relationship between strains and terrorism.

GSTT

GSTT explains why some individuals are more likely than others to join or form terrorist groups and commit terrorist acts, but the theory can also be used to explain why some collectivities are more likely to develop terrorist groups and engage in terrorism. Terrorism is defined as "the commission of criminal acts, usually violent, that target civilians or violate conventions of war when targeting military personnel; and that are committed at least partly for social, political, or religious ends" (Agnew, 2010:132). Terrorism differs from the street crimes, to which GST is usually applied in two key ways. Terrorism is generally more extreme, since it often involves serious violent acts against civilians who have done nothing to directly provoke their victimization. And terrorism is not committed strictly out of self-interest, but wholly or in part for political, social, or religious reasons. It should also be noted that terrorism is usually committed with the support of sub-national groups, while most adult street crimes are committed alone. The GSTT devotes special attention to the extreme and collective nature of terrorism, including the frequent targeting of civilians. In doing so, the GSTT draws on the larger terrorism literature, especially the work of Black (2004), Goodwin (2006), Gurr & Moore (1997), Senechal de la Roche (1996), and Smelser (2007).

The Collective Strains That Contribute to Terrorism

The GSTT states that terrorism results from collective strains or strains experienced by the members of an identifiable group or collectivity, most often a race/ethnic, religious, class, political, and/or territorial group. These strains are high in magnitude, with civilian victims, are seen as unjust, and are caused by substantially more powerful others, including complicit civilians, with whom members of the strained collectivity have weak ties. Each of these characteristics is discussed in the following text. It is critical to note that many terrorists do not *personally* experience these strains; rather, they are *vicariously* experienced, affecting members of the collectivity with whom the terrorists strongly identify. For example, as Sageman (2008:48) states of the terrorists in his study:

> … the vast majority of the terrorists in the sample came from the middle class. It is not poverty that causes terrorism, even though terrorists claim to carry out their acts on behalf of their poor brethren—it is instead vicarious poverty. Terrorists justify their acts in terms of justice and fairness and on behalf of the less fortunate—not from their own destitution.

High in Magnitude, with Civilian Victims   Collective strains that are high in magnitude have several features. They are severe, involving acts that cause much physical, social, economic, and/or mental harm, including death, serious physical injury, starvation, sexual assault, dispossession, the loss of livelihood, imprisonment, and major threats to core identities, values, and goals. They are frequent, of long duration, and expected to continue into the future. And they are widespread, affecting large number or percentage of people in the collectivity. The affected people include civilians or nonmilitary individuals not directly involved in hostile acts against the source of the strain. Case studies of terrorist groups provide much support for this argument (see Agnew, 2010, for an overview).

It should be noted that the members of certain terrorist groups do not appear to be suffering from severe strain, but, upon close examination, are quite high in both objective and subjective strain. For example, this is the case with the neo-Nazi and Skinhead groups

in the United States (Agnew, 2010; Blazak, 2004). These groups are largely composed of white, working-class, heterosexual males who do not seem to be suffering from the severe strains listed earlier. However, case studies indicate that the members of such groups are experiencing major threats to their employment prospects and status, with these threats stemming from the loss of blue-collar jobs that pay a good wage and the rise of the civil, feminist, and gay rights movements. Further, neo-Nazis and Skinheads have adopted a worldview that exaggerates the strains they face. They believe, for example, that the "Zionist Occupation Government" (ZOG) poses a major threat to all that they value, including their material well-being, status, and freedom. This threat from ZOG is imaginary, but it nevertheless constitutes a major subjective strain for group members. The members of other terrorist groups likewise tend to exaggerate the strains they face— for example, imagining that there is a global conspiracy against Islam (e.g., Sageman, 2008). It is therefore important to consider both objective and subjective strains when examining terrorism.

Perceived as Unjust   Those collective strains that result in terrorism are also perceived as unjust (also see LaFree & Ackerman, 2009; Rice, 2009). Collective strains may result from several sources, including natural disaster, accident (e.g., fires), and the actions of those in the strained collectivity (members victimize one another). The collective strains that cause terrorism, however, are believed to result from the voluntary and intentional violation of relevant justice norms by external agents. In particular, the collective strain is seen as undeserved and *not* in the service of some greater good, such as God or country. A collective strain is also likely to be seen as unjust if the victims have no voice in the decision to inflict the strain, they do not like and trust those inflicting the strain, and no rationale is provided for the infliction of the strain. In addition, a perception of injustice is likely when the strain violates strongly held norms and values, such as those embodied in criminal or religious law. Further, a perception of injustice is likely if the collective strain involves treatment that is much worse than past treatment in similar circumstances or the treatment experienced by similar others (see Agnew, 2006, 2010). Perceptions of injustice are commonly referenced in case studies of terrorist groups, and they are regularly voiced by terrorists themselves (Agnew, 2010; Rice, 2009). Such perceptions play a critical role in generating the moral outrage that helps prompt terrorism (more in the following text).

Caused by More Powerful Others*, Including Complicit Civilians, with Whom Members of the Strained Collectivity have Weak Ties*   Finally, those causing the strain are viewed as "others" or out-group members, usually because they differ on one or more salient dimensions, such as religion, race/ethnicity, territorial location, nationality, and political ideology/ affiliation. These others are seen as more powerful because of their greater resources, including numbers, military equipment and skills, and/or external support. The strain these others inflict are at least partly attributed to civilians, usually because civilians are believed to support the government/group inflicting the strain in various ways (e.g., voting, paying taxes, public expressions of support); because civilians benefit from the infliction of the strain (e.g., occupying land formerly held by those in the strained collectivity); and/or because civilians fail to take action against those who inflict strain. As Sageman (2008:75) states, for example, the "global Islamist terrorists" believe that "Westerners [including civilians] are guilty because they are infidels and support the infidel enemy army." And members of the strained collectivity have weak emotional and material ties to those believed responsible for their strain. These weak ties may stem from a lack of contact, strong cultural

differences (e.g., language, religious differences), and/or large differences in wealth, power, and status—which tend to limit positive contact and mutually beneficial exchanges.

In sum, those strains most likely to result in terrorism have several key characteristics. The specification of these characteristics goes beyond that in most strain-based explanations of terrorism, which simply list particular strains said to cause terrorism, such as material deprivation. The GSTT states that it is critical to take account of these characteristics. Strains such as material deprivation are most likely to increase terrorism when they are severe and prolonged, with civilian victims; are perceived as unjust; and are believed to be caused by more powerful others, including complicit civilians, with whom members of the strained collectivity have weak ties. The reasons why these characteristics increase terrorism are discussed in the following text.

Reasons Why These Strains Increase the Likelihood of Terrorism

It is important to identify the intervening mechanisms between collective strains and terrorism not only because doing so provides a fuller explanation of terrorism, but also because terrorism might be reduced by targeting these intervening mechanisms—as well as the strains that produce them. Collective strains of the preceding type increase the likelihood of terrorism for several reasons, as discussed in the following subsections.

Contribute to Negative Emotional States and Traits   These collective strains, high in magnitude and perceived as unjust, lead to strong negative emotions that are conducive to terrorism, including anger, frustration, envy, humiliation, and hopelessness. Case studies of terrorism routinely report that such emotions characterize those in the strained collectivities, particularly those involved in terrorism (see Agnew, 2010). Negative emotions, in fact, are at the core of Rice's (2009) recent theory of terrorism—with Rice citing numerous accounts which suggest that these emotions are perhaps the major driving force behind terrorism (also see Rice & Agnew, 2013). These emotions create much pressure for corrective action: individuals feel bad and want to do something about it. The emotions reduce the ability to cope in a legal manner. Angry individuals, for example, are less able to accurately assess their situation and negotiate with others. Emotions lower inhibitions, reducing the awareness of and concern for the consequences of one's behavior. And these emotions create a strong desire for revenge. These emotions, in fact, may lead terrorists to engage in actions that run counter to their long-term interests, such as engaging in acts of revenge even though such acts threaten the achievement of their ultimate goals (Araj, 2008). Further, the continued experience of these strains contributes to emotional *traits* such as trait anger. Those high in trait anger exaggerate the severity of strains, are easily upset, become very angry when upset, and tend to respond in an aggressive or antagonistic manner (Agnew, 2006; Bernard, 1990; Maier-Katkin et al., 2009).

Reduce the Ability to Legally and Militarily Cope   While collective strains and the negative emotions they generate create much pressure for corrective action, these strains reduce the ability to legally and militarily cope. These strains frequently involve the massive loss of material resources, exclusion from the political process, and the harsh suppression of protest activity. Further, these strains are inflicted by substantially more powerful others, with whom members of the strained collectivity have weak ties. These facts make it difficult to effectively employ coping strategies such as negotiation, lobbying, legal action, protest,

and military action. Those in the strained collectivity may turn to street crimes, but such crimes do little to address the collective strain and exacerbate the suffering of those in the strained collectivity. The consequence is that terrorism offers one of the few coping options. In particular, civilians associated with the source of strain are often readily targeted. Further, terrorism is *sometimes* an effective coping strategy, ending or alleviating the collective strain that motivated it (e.g., Pape, 2005; Smelser, 2007). Terrorism also serves as a release for negative emotions such as anger and humiliation.

Reduce Controls that Restrain Terrorism   Collective strains of the preceding type break down the social and self-controls that restrain terrorism. These strains reduce one's stake in conformity, since they involve the loss of valued possessions, including work, home, land, and sometimes the lives of family members and friends. They weaken the belief that terrorism is wrong (more in the text that follows). They reduce the likelihood that members of the strained collectivity will sanction terrorists, since the experience of these strains may create tolerance or even support for terrorism. And, of course, these strains further reduce ties between members of the strained collectivity and those others deemed responsible for the strain. (However, as noted in the following text, the strains may increase ties among those in the strained collectivity.) Given these effects, members of the strained collectivity may come to feel that they have little to lose through terrorism. Further, these strains reduce certain aspects of self-control. As the psychological research makes clear, self-control is a muscle that is depleted through use (Vohs & Baumeister, 2011). Enduring collective strains of the preceding type requires the exercise of much self-control. Eventually, self-control may weaken, increasing the likelihood that individuals will engage in risky acts with little thought for the consequences to themselves or those inflicting the strain. (However, as noted in the following text, collective strains do not reduce that aspect of self-control involving concern for those in one's *in-group*.)

Provide a Model for Terrorism and Foster Beliefs Favorable to Terrorism   The preceding collective strains frequently involve violent acts against civilians, thereby providing a model for terrorism. For example, a spokesperson for the Taliban explained the 2014 murder of close to 150 people at a Pakistani school, including many schoolchildren, by stating that "we selected the army's school for attack because the government is targeting our families and females" (*New York Times*, 2014). These strains also promote beliefs favorable to terrorism, including techniques of neutralization, such as denial of the victim (those responsible for the collective strain, including complicit civilians, deserve severe retaliation); appeal to higher loyalties (e.g., terrorism is necessary to protect those in the strained collectivity, defend one's religion); denial of responsibility (there is no viable option except terrorism); and condemnation of the condemners (terrorism is no worse than the acts committed by the source of the collective strain). Related to this, such strains promote the denigration and even dehumanization of those believed responsible for the strain (see especially Maier-Katkin et al., 2009). It is, of course, much easier to commit horrific acts against those seen as evil and subhuman.

Strengthen In-group Identification   In sum, individuals experiencing collective strains of the preceding type are under much pressure to act; they have few legal or military options for action; the costs of terrorist action are low; and they have a disposition for terrorism—given their rage, exposure to models for terrorism, and beliefs favorable to terrorism. But these collective strains have still other effects that heighten the likelihood of terrorism. When the

members of a collectivity believe that they are under attack by a more powerful external agent, in-group identification and ties are strengthened. Such ties, in turn, heighten the experience of vicarious strain, such that every strain experienced by a member of the collectivity is felt strongly by others and taken as a personal attack. Also, many come to believe that they have a responsibility for protecting the collectivity, especially those who traditionally play the protector role.

Promote the Creation of Terrorist Groups   Finally, these collective strains contribute to the formation of terrorist groups. The classic strain theorists argue that gangs and other criminal groups often emerge when individuals experiencing similar strains interact with one another (Cohen, 1955; Cloward & Ohlin, 1960). The gangs serve as problem-solving groups, helping individuals cope with the status and monetary strains they face. A similar phenomenon may occur when the members of a collectivity confront collective strains of the preceding type. Cottee (2011:738) makes this point in explaining al-Qaeda's "third wave," arguing that "third wave jihadism can be described as a collective solution, devised by young Westernized Muslim males, to resolve their twin problems of status-frustration and identity confusion." It is difficult to respond to collective strains on an individual basis, so people sometimes come together to help develop a collective response. And, for all of the reasons indicated in the preceding text, this response may take the form of terrorism. Further, the media and the Internet have come to play a key role in fostering the development of such groups. They do much to spread information about the collective strains that prompt terrorism, as well as promote beliefs favorable to terrorism. And they facilitate interaction between strained individuals, including those at some physical distance from one another. And terrorist groups, once formed, of course play a pivotal role in encouraging terrorism. They spread information on collective strains; foster beliefs favorable to terrorism; promote terrorism as an effective response; recruit individuals to the cause; provide moral, material, and other support for terrorism; shield members from the influence of more moderate individuals and groups; and reinforce terrorist acts through social approval, status, material rewards, and promises of reward in the afterlife.

Factors that Condition the Effect of Collective Strains on Terrorism

While the collective strains described in the preceding text increase the likelihood of terrorism, most people and groups experiencing these strains do *not* respond with terrorism. The likelihood of a terrorist response is influenced by a range of factors that affect the subjective interpretation and emotional reaction to these strains, the ability to engage in both terroristic and non-terroristic coping, the costs of terrorism, and the disposition for terrorism. These factors derive from both GST and the larger literature on terrorism, including other theories of terrorism. While GSTT highlights the distinctive contribution of certain collective strains in promoting terrorism, it readily acknowledges that other factors also play a major role in shaping the reaction to these strains. In particular, the GSTT states that individuals and groups in the strained collectivity are more likely to respond to collective strains of the preceding type with terrorism when:

- They strongly identify with the strained collectivity and feel some responsibility for its defense, perhaps because they have characteristics traditionally associated with the protector role in the collectivity.

- They personally experience certain strains associated with membership in the collectivity, such as the discrimination experienced by certain Muslims in Western countries. Such strains make individuals more sensitive to collective strains and receptive to beliefs conducive to terrorism (e.g., Muslims are under attack). Also, participation in terrorist groups often alleviates many of these personally experienced strains, such as status frustration, social marginalization, material deprivation, and identity confusion (see Agnew, 2010; Cottee, 2011). This increases the appeal of the groups.
- The larger collectivity lacks the resources, skills, and opportunities to cope through non-terroristic means. Among other things, it lacks financial resources, has few legal and political resources, and is in a state that provides few opportunities for coping through the political process. Also, the larger collectivity receives little conventional support in addressing the collective strains from others, including non-governmental organizations, foreign nations, and international organizations such as the United Nations.
- They have the ability to engage in terrorist coping, including certain physical skills, a willingness to engage in risky activities, and the knowledge and material resources to commit terrorist acts.
- Individuals and the larger collectivity receive support for terrorism, including from friends, family, community, other terrorist groups, and foreign nations. This support may involve information, moral support, material resources, and direct assistance (e.g., the provision of outside fighters).
- They are low in certain types of conventional social control. This includes direct control against terrorism by family, community, and the state. They also have a low stake in conformity and weak ties to those in the group inflicting strain.
- They possess traits favorable to terrorism, including negative emotionality and cognitive inflexibility (a tendency to see things as "black or white").
- They associate with close others who support and/or engage in terrorism, including family, friends, and community members. Certain terrorism researchers, such as Sageman (2008), assign a central role to this factor (also see LaFree & Ackerman, 2009).
- They hold beliefs favorable to terrorism. Such beliefs emphasize the importance of the collectivity/in-group; increase sensitivity to certain strains (e.g., place much emphasis on honor and masculinity); attribute strain to the unjust acts of external others, including complicit civilians; define rage and humiliation as the appropriate response to these strains; depict the source of strain as evil and subhuman; discourage contact with the source of strain; excuse, justify, or require a terroristic response; and/or promise rewards for terrorism, including rewards in the afterlife (see LaFree & Ackerman, 2009).
- They view the anticipated costs of terrorism as low and the benefits as high.

These factors are *somewhat* independent of the collective strains described earlier, but it is important to note that they are also influenced by these strains. As discussed earlier, for example, exposure to these collective strains reduces coping resources, reduces certain types of social control, fosters beliefs favorable to terrorism, and contributes to the development of groups committed to terrorism.

Summary

GSTT represents an elaboration of GST; it describes those particular strains, emotions, intervening mechanisms, and conditioning variables most relevant to the explanation of terrorism. The GSST states that those collective strains most likely to result in terrorism are

high in magnitude, with civilian victims; are seen as unjust; and are caused by more powerful others, including complicit civilians, with whom members of the strained collectivity have weak ties. These strains increase the likelihood of terrorism by leading to negative emotional states and traits, including anger, frustration, and humiliation; reducing the ability to cope through legal channels and military rebellion; reducing levels of control; providing models for terrorism and fostering beliefs favorable to terrorism; strengthening in-group ties; and prompting the development of terrorist groups. The effects of these collective strains on terrorism, however, is conditioned by factors affecting the ability to cope in a terroristic and a non-terroristic manner, the costs of terrorism, the opportunities for terrorism, and the disposition for terrorism.

The GSTT is a social psychological theory. It does not describe why some groups are more subject than others to collective strains or differ in those factors that influence the response to collective strains. Nevertheless, it has a key role to play in explanations of terrorism, pointing to those independent, intervening, and conditioning variables that increase terrorism. As described in Agnew (2010), case studies of terrorism provide much support for the GSTT. However, quantitative research on the theory is needed. Several recent dissertations have examined aspects of the theory, with somewhat supportive results (Freis-Beattie, 2014; Goodrich, 2011; Kayaoglu, 2008). However, limitations in existing data prevent researchers from conducting a full test of the theory. Hopefully, the theory will help guide further efforts at data collection and inspire more comprehensive tests.

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Social Learning Theory and Becoming a Terrorist: New Challenges for a General Theory

J. Keith Akins and L. Thomas Winfree, Jr.

Introduction

In the second decade of the twenty-first century, the actions of groups such as *al-Qaeda*, in Yemen and the Arabian Peninsula, and the *Islamic State of Iraq and the Levant*, known variously as IS, ISIL, or ISIS, have come to redefine and expand the concept of terror. News reports and other media outlets describe hard-to-fathom conversions leading otherwise normal-appearing individuals to support, materially and personally, the horrific actions of such groups. Consider the following examples gleaned from among the alleged 20,000 foreigners who have joined or attempted to join ISIS in recent years (Berlinger, 2015): Four young Colorado women attempt to join terrorist fighters in Syria but are thwarted by US government actions, while three teenage girls from England are successful in their attempt to join ISIS; a Canadian teenager, a convert to Islam, goes to Syria, where he becomes a martyr for ISIS; a British-educated computer scientist, born into a stateless family in Kuwait, becomes the most hunted terrorist in the world; and a blond Swedish ISIS fighter exclaims, "I am having the time of my life." News accounts often paint such individuals as leading troubled lives, fraught with "anger-management" issues and other psychological disorders. Can such idiosyncratic explanations provide useful insights into the breadth and depth of such terrorist movements as al-Qaeda and ISIS?

We suggest that attempts to understand the individual motivations behind the actions of the few "celebrated cases," as Walker (2014, p. 44) has called them, in criminal justice can be counterproductive, much like looking at individual trees and forgetting the forest. Celebrated cases can also fall prey to what Schur (1971) called "retrospective interpretation," or the *ex post facto* attempt to make sense of seemingly unfathomable actions by finding "hidden" reasons or causes in the perpetrator's past, ones that should have alerted society to the threat posed by that individual. Besides limited generalizability, such practices may ignore important characteristics of terrorist groups. Specifically, the majority of adherents are often drawn from the same region as the conflict, as foreigners, the largely European and North American recruits previously described, account for perhaps 10% of ISIS's estimated 200,000 strong army (Cockburn, 2014). Moreover, it is doubtful that even a significant

portion of ISIS fighters are psychologically disturbed adults or misguided teenagers, at least not at the point when they became "true believers." We suspect that such outcomes are the work of other sociological forces, ones that scholars have previously linked to the movement of otherwise normative people into belief and to action scenarios that push society's normative limits. An explanatory approach that has unique cachet for the current case is the *social learning theory* (SLT). Before turning to an examination of that theory's utility in this context, we first define *terrorism* and *terrorists*.

Defining Terrorists and Their Illegal Actions

We avoid etymological, political, or cross-cultural examinations of the use and misuse of the terms "terrorism" or "terrorists," turning instead to a pragmatic definitional source. To wit, we define terrorism in accordance with the US Code. Even here, there is a bit of divergence, as the code in question, 18 US Code § 2331, recognizes two forms of terrorism: *international terrorism* and *domestic terrorism*. Consider the following definitions taken from that code:

1. the term "international terrorism" means activities that—
    (A) involve violent acts or acts dangerous to human life that are a violation of the criminal laws of the United States or of any State, or that would be a criminal violation if committed within the jurisdiction of the United States or of any State;
    (B) appear to be intended—
        i.   to intimidate or coerce a civilian population;
        ii. to influence the policy of a government by intimidation or coercion; or
        iii. to affect the conduct of a government by mass destruction, assassination, or kidnapping; and
    (C) occur primarily outside the territorial jurisdiction of the United States, or transcend national boundaries in terms of the means by which they are accomplished, the persons they appear intended to intimidate or coerce, or the locale in which their perpetrators operate or seek asylum.
2. the term "domestic terrorism" means activities that—
    (A) involve acts dangerous to human life that are a violation of the criminal laws of the United States or of any State;
    (B) appear to be intended—
        i.   to intimidate or coerce a civilian population;
        ii. to influence the policy of a government by intimidation or coercion; or
        iii. to affect the conduct of a government by mass destruction, assassination, or kidnapping; and
    (C) occur primarily within the territorial jurisdiction of the United States.

Note that these legalistic definitions describe actions and goals, but leave undefined the motivating ideology. Terrorists can seek to advance any political or religious ideology.[1] Whether or not the ideology is "good" or "bad" has no bearing on defining the acts as terrorism.

We selected these two definitions from a plethora of academic and governmental options for three reasons. First, over the years, scholars have offered often-contradictory definitions of various degrees of complexity, and none has gained consensus. Second, the work of US

governmental agencies provides small guidance in solving this conundrum—the Federal Bureau of Investigation, the Department of Defense, and the Department of State all employ different, while similar, definitions. Finally, we chose 18 US Code § 2331 because it includes an important legal component for combating terrorism: This is the standard that federal prosecutors must meet to gain a terrorism conviction.

Towards Understanding the Process of Becoming a Terrorist

Decades of research into terrorists' psychology has generally been disappointing. Terrorism does not typically appear to be the result of psychopathology (Hudson, 1999, pp. 60–61; see Elbert, Weierstall, & Schauer, 2010; Post, 2010; Weierstall, Haer, Banholzer, & Elbert, 2013). Furthermore, attempts to create a singular terrorist psychological profile have failed (Laqueur, 1999, pp. 79–104). Several scholars have created "mini-profiles" aimed at identifying actors at increased risk of perpetrating specific types of terrorism. For example, terrorists who engage in Far Right racist terrorist acts share some ideological and demographic factors with one another, but not with terrorists who commit Far Left animal rights or ecological terrorist acts. These, in turn, are different from anti-abortion terrorists or al-Qaeda terrorists.

While Hamm (2007) pioneered ideology-specific profiles and Chermak and Gruenewald (2015) couched them in conceptual/theoretical terms, we use a sociological perspective on becoming a terrorist. As a first step, we adopt Horgan's (2009) definition of "radicalization" as the process through which a person's acceptable and legal behaviors change and become terroristic. Some scholars argue that radicalization does not exist or is irrelevant (Borum, 2011; Furedi, 2009; Hoskins & O'Loughlin, 2009), but it is obvious that law-abiding citizens do not simply awaken one morning and decide to join a terrorist group or commit mass murder. Most of the radicalization debate centers around whether the focus should be placed on beliefs or behaviors. We accept Neumann's (2013) argument that there is an inevitable relationship between the two and argue further that both ideological and behavioral change is the result of social processes.

Terrorism, from this perspective, results from a cluster of social forces colliding with individuals, and it is our further contention that the overarching social process can be understood using SLT. These forces act upon an individual, teaching that he or she, along with his or her respective groups, are victims of unjust oppression; consequently, the only viable recourse is to commit terrorist acts. A terrorist, then, is anyone actively involved at any level in the commission of a terrorist act, including not only the active perpetrator, but also the perpetrator's support team: the recruiters, the trainers, the financial supporters, and the ideologues behind the movement. In other words, terrorist groups exemplify White's (2012, p. 73) categories of command, active cadre, and active supporters. We further argue that White's (2012) "passive supporters" create the terrorists' learning milieu. Akers' body of work helps to inform us in this regard, as he posits the critical role played by both beliefs and behavior in the learning process.

From Sutherland to Akers: The Evolution of Learning Theory

All social behavior is learned, including crime. Sutherland made this claim in his first complete statement on differential association theory, which appeared in the 1947 edition of *Principles of Criminology*. While his theory included the nine propositions, Sutherland never explicitly stated how and why someone adopted a criminal versus a law-abiding

behavioral orientation. He simply stated, in the principle of differential association, that one commits a criminal act, no matter what the specific nature of that crime, owing to the fact that the person in question has learned certain definitions—by which he meant rationalizations, attitudes, and perspectives—favorable to the miscreant act that were in excess of those favorable to more normative conduct. As Sutherland further noted, learning to be a criminal "involves all the mechanisms that are involved in any other learning" (1947, p. 7). For any empiricist attempting to test this theory, such a statement is woefully inadequate to the task. It was left to others to specify the nature of the learning mechanisms.

Burgess and Akers (1966a, 1966b) extended Sutherland's theory, recasting it in the language of operant conditioning and calling it "differential association–reinforcement theory." Burgess and Akers used operant conditioning to explain how any learned content becomes part of an individual's social psychological makeup, an element missing from Sutherland's formulation. For example, certain behaviors are conditioned to serve as reinforcers and aversive stimuli, the latter called "punishers." Reinforcers generally cause behavior to continue, while punishers have the opposite effect. However, in practice, operant conditioning, as the entire process in known, is far more complex. Consider, for example, the following situations: (1) positive reinforcement is the presence of a valued stimulus in the wake of a certain action, followed by an increase in the rewarded behavior; (2) some behaviors may result in a valued stimulus being withheld or avoided, causing an increase in the baseline behavior; (3) when a punisher is present in the individual's environment, then this positive punishment decreases the behavior in question; and, finally, (4) when a reward is removed or lost to the individual, a condition known as "negative punishment," then the behavior likewise decreases.

By 1973, Akers (see also 1985) had renamed his theory, calling it "social learning theory," and identifying four key elements, the first three of which have clear implications for the study of terrorists. First, *differential association* refers to direct social interaction with members of a primary group, and less concrete, but no less important, identifications with more distal groups, the latter also serving as sources of learning. These associations represent not simply counts of one's close friends and assessments of their attitudes, orientations, and behavior, but rather the sum total of all social influences—including family, school teachers, other public officials, neighbors, and religious figures. *Imitation* occurs when an individual copies the behavior of others, perhaps not completely understanding the behavior's importance or in what ways or even when it might be rewarding. Imitation is the most basic form of learning, essentially a case of monkey-see-monkey-do. *Definitions* serve as behavioral guideposts for how we think about certain behaviors as good or bad, rewarding or punishing.

The fourth element, *differential reinforcement*, is more complex and exists in both social and nonsocial forms. Such reinforcements are anticipatory or prospective in nature, suggesting to the actor whether the behavior guided by those definitions is likely to be rewarded or punished, including those stimuli that are physiological in nature. In essence, Akers specified that differential reinforcements provide definitions that will push a person toward or away from a decision to engage in deviant behavior, including crime and delinquency.

Akers (1998) extended SLT, calling it social structure social learning (SSSL), by adding structural components. Although both Sutherland and Akers previously had acknowledged the role of differential social organizations, Akers added four specific structural dimensions. First, *differential social organization* consists of structural correlates that have the potential to impact crime and delinquency rates, an idea taken directly from Sutherland. Such definable social systems, including the area's age composition, population density, and

other characteristics of differential social organization, provide protections against or risks for "relatively high or relatively low crime rates" (Akers, 1998, p. 332).

The second social structural dimension identifies individuals and social groups that occupy specific niches in the larger social structure, what Akers (1998, p. 333) called *differential location in the social structure*. That is, where individuals exist in terms of social class, gender, race and ethnicity, marital status, and age influence their social standing by helping to determine the groups in which they hold membership within the social structure; crime rates vary according to these social structural characteristics as well.

The third dimension, *theoretically defined structural causes*, consists of variables that have ties to extant structural criminological theories, including the various incarnations of anomie theory, social disorganization theory, conflict theory, and class oppression, *inter alia*. About the ties between structural causes, be they social disorganization or conflict, and misbehavior, Akers (1998, p. 334) noted: "The less solidarity, cohesion, and integration there is within a group, community, or society, the higher will be the rate of crime and deviance."

Finally, Akers recognized that personal networks constitute one's informal and semi-formal agents of socialization and social control. The term *differential social location in groups* refers to such entities as family, friendship, and peer groups, but can include ones that have more limited social functions, including leisure groups, colleagues, and work groups. In sum, these primary and secondary groups "define the immediate social context within which [SLT's] behavioral mechanisms operate" (Aker, 1998, p. 335).

All crime is learned, a claim that includes illegal acts committed by terrorists, no matter the underlying ideology, religious (or pseudo-religious) underpinnings, or location in the world. The terrorists could be Klansmen in the American South or ISIS militants in Syria and Iraq. For the purposes of this chapter, what they learn is less important than the learning process. We propose that Akers' SSSL model provides unique insights into the process of becoming a terrorist, starting with an understanding of radicalization.

Social Structure and Social Learning: Understanding Radicalization as a Social Learning Process

We are not the first to link SLT to terrorists' actions (see also Silverman, 2002, and Hamm, 2007). Akers and Silverman (2004), for example, claimed that the learning mechanisms at work converting and guiding terrorists are indistinguishable from those influencing nonextremists. Winfree and Akins (2008) not only suggested that SLT has applicability for suicide bombers, specifically those operating in Gaza, but also expanded the list of neutralization techniques to include familial denial of suicide, describing it as an act of sacrifice that benefits the perpetrator's family in real and symbolic ways. Wilmer and Dubouloz (2011) coined the phrase "transformative radicalization" to refer to learning theory's application to the Islamist perspective. Quoting Jenkins (2007), they noted that, as a precursor to undergoing violent Islamist radicalization, the individual must internalize "a set of beliefs, a militant mindset that embraces violent jihad as the paramount test of one's convictions." It is through the process of transformative learning, they claimed, that such changes occur. Hamm argued that SLT explains how terrorists acquire skills "through 'deliberate tutelage, training, and socialization'" (2007, p. 13), and uses the example of Muhammed al-Owhali to illustrate how learning theory applied to his isolation and indoctrination (p. 77). Silverman and Martinelli (2009) demonstrated SLT's practical use in the US Army Human Terrain

Team's explanation of how terrorists "inculcate definitions unfavorable to engaging in suicide bombings and improvised explosive device (IED) emplacement" (p. 1).

Given this conceptual foundation, we contend that linking the fundamentals of SLT/SSSL to terrorists and their actions is a relatively straightforward task. In support of this contention, we turn to a series of conceptual arguments about the social structures in which likely recruits live, as well as the behavioral and belief systems behind their recruitment. We begin with the social structural elements and their ties to radicalization and recruitment to terrorist groups.

Social Structural Ties

The Hoffman/Sageman conflict provides us with an example of how terrorism experts are aware of the social structural ties, but have not yet clearly addressed their theoretical significance, a shortcoming we rectify in this chapter. Briefly, B. Hoffman (1999) maintains that hierarchical terrorist organizations centralize recruiting, command, and control, whereas Sageman (2004) argues that terrorist organizations have evolved into decentralized, non-concatenated networks, and that individuals and small groups recruit themselves (see also Picarelli, 2009). In other words, B. Hoffman (1999) views terrorist organizations as "top down," and Sageman (2004) sees them as "bottom up." Under a "convergence model," the most active learning occurs when the conditions at the bottom are ripe for conversion and radicalization, and a hierarchical structure emerges at the top. A case in point is the relatively recent and explosive emergence of ISIS on the world stage, beyond even Syria and Iraq. F. G. Hoffman (2008) argues that both views are correct—that al-Qaeda is still a central viable organization, but that loose networks and "lone-wolf" terrorists are an evolving threat.

Much of this evolution into small cells, groups of friends, and even individuals has occurred via social media and personal contacts. Such conditions are part of Akers' SSSL model, including the structural dimension of differential location in the group. Researchers have examined the question of "radicalization" or "self-radicalization," but no single answer has gained consensus among scholars (Neumann, 2013). If we argue that terrorism is learned behavior, where and how is it learned? In some parts of the world, the answer seems obvious. In the West Bank and Gaza, for example, children learn to support terrorists or become terrorists themselves in their schools, their mosques, at summer camps, and even in their families (Winfree & Akins, 2008). Established organizations recruit marginalized or exuberant youth largely as described by B. Hoffman (1999).

The views held within Western democracies about terrorists and their actions suggest that different forces may be at work. Sageman (2004) described groups of friends making contact with terrorist organizations through "connected" relatives or friends, or even making contact via the Internet, a socializing force examined later in this chapter. This evolution away from "top–down" recruitment may go even further, including individuals sitting at home in front of their computers who "self-radicalize" and then either carry out a lone-wolf attack or seek to join a network or organization (Sageman, 2004; Thompson, 2011).

Muslim population surveys throughout the world tell us that support for terroristic acts of violence committed against civilian populations in the name of Islam—including suicide bombings—is high in the Middle East and North Africa. Various surveys indicate support from 20% to as high as 70% of the populations in different countries; however, this is not the case in the United Kingdom and the United States, where such support is generally less than 3% of those surveyed (Fair & Shepherd, 2006; Kohut, Allen, Doherty, & Funk, 2005;

Kohut, Keeter, & Smith, 2011). Moreover, within a sample of British Muslim residents, sympathies for terrorists and their actions were highest among persons 20 years of age and younger, full-time students, born in the United Kingdom, who spoke English at home, and who had high-earner parents (Bhui, Warfa, & Jones, 2014). Radicalization among Muslim-sympathizing persons in Western Europe and North America, where the structural dimensions would appear to differ dramatically from those found in developing nations, is likely to produce far lower numbers of possible recruits than in the Middle East or North Africa.

Radicalized learning is more likely when potential terrorists are isolated from conflicting messages.[2] This situation can occur when they are physically separated from society and surrounded by true believers, as occurs, for example, in prison or in segregated residential compounds, or even hanging with "gang bangers" (Decker & Pyrooz, 2015). Buford Furrow, for example, lived for a while in the Aryan Nations compound in Idaho where he was taught that an apocalyptic race war was imminent and that he could initiate this war by providing a spark that would lead to a conflagration. In August 1999, he drove to Los Angeles, and attacked the day care center at the North Valley Jewish Community Center. Using an Uzi, he fired 70 rounds, wounding three Jewish children, the receptionist, and a counselor. While fleeing the scene, he encountered a Filipino–American postal worker and shot him nine times with a handgun. Furrow fully expected that his actions would inspire white Christians across the nation to follow his lead and rise up against what he perceived as the Jewish-controlled government. Consider, too, the Covenant, Sword, and Arm of the Lord, an Arkansas-based Christian Identity religious compound in the 1970s and 1980s. The group produced a number of domestic terrorists including Richard Wayne Snell and Steven Scott, and former members allegedly had ties to Oklahoma City bomber Timothy McVeigh.

Values, Definitions, and Instrumental Conditioning

In terms of SLT, belief becomes the discriminative stimuli for behavior, and behavior can itself serve as a reinforcer for continued behavior—in this case, more acts of terror. However, suicide bombers are perhaps the most difficult to understand of all terrorists. Part of this dilemma is that there is no continued behavior, but rather, for the successful bomber, just a single act of terror. It is made even more unfathomable by the fact that the actors/learners do not appear to suffer from mental disease or defect (Kruglanski, Chen, Deschenes, Fishman, & Orehek, 2009; Post, 2010). Hafez (2004, pp. 6–8) found three common definitional themes among Palestinian suicide bombers:

1. [T]he insistence among suicide bombers and their supporters that "martyrdom operations" are necessary to fulfill one's commitment to God and the Prophet Muhammad, who urged Muslims to fight persecution and not fear death.
2. [T]he redemptive act of martyrdom. Suicide bombings are not only an opportunity to punish an enemy and fulfill God's command to fight injustice, it is also a privilege and a reward to those most committed to their faith and their values.
3. The act of martyrdom is seen as an attempt to redeem society of its failure to act righteously.

While most Muslims will not become suicide bombers and further believe that suicide is an inherently non-Islamic action, potential bombers are isolated from "opposing voices based on competing interpretations of sacred texts, prophetic traditions, and analysis of

circumstances that activate these sacred commandments" (Hafez, 2004, p. 12). The social conditions isolating potential terrorists can involve many of Akers' structural dimensions, including social geography, family, exposure to propaganda, or isolation, and indoctrination. Moreover, as suggested by Winfree and Akins (2008), the bomber's family may accrue the means to neutralize the loss of a loved one by material rewards (e.g., cash bounty or payments) or increased status within their local community, or both. A martyr's death is valued as a goal by the martyr and as an outcome by his or her family and friends. A highly supportive, fatalistic value system is an essential part of the social psychology of terrorists of all stripes, especially if their first and last mission has suicide as its goal (Gelfand, LaFree, Fahey, & Feinberg, 2013; Kruglanski et al., 2009; Post, 2010). Anecdotal evidence further suggests that some ISIS fighters wear suicide vests into combat; if they fall wounded or are captured, they can earn the ultimate status as *shaheed* or holy martyr (Berlinger, 2015).

What about individual factors? Are there individual differences that make one person more or less susceptible to radicalization than another? Hoffer (2010, p. 14) argued the following in *The True Believer*: "A man is likely to mind his own business when it is worth minding. When it is not, he takes his mind off his own meaningless affairs by minding other people's business." Post (2010, p. 17, emphasis as in original) has clarified this process:

> The statement, "It's not us; it's *them*; *they* are responsible for our problems" provides a psychologically satisfying explanation for what has gone wrong in the lives of potential terrorists. And it is therefore not only immoral to ignore them, it becomes a moral imperative to strike out at *them*, to remove the source of the problems.

Discontent is an essential precursor to joining a mass movement, yet discontent alone is not enough. As Hoffer (2010, p. 11) stated:

> For men to plunge headlong into an undertaking of vast change, they must be intensely discontented yet not destitute, and they must have the feeling that by the possession of some potent doctrine, infallible leader or some new technique they have access to a source of irresistible power.

Thus, terrorist groups must expose potential recruits to a narrative—a system of continuously reinforced values and beliefs—that focuses the discontent of the individual and provides him or her with a method of solving his or her problems and gaining reward, be it wealth, advancement, glory, status, or a post-life paradise. Those values and beliefs that contradict this message are to be avoided or kept out of the immediate social environment and even physical environment of the recruit/learner. It is no coincidence that "Boko Haram," the name commonly used to describe a Nigerian Islamist terrorist group, means "Western education is forbidden." Western values and beliefs are not only eschewed, but also forbidden, and their practice punished, constituting positive punishers. The constant recitation of selected verses from the Qur'an provides an example of such a stimulus, which eventually leads to their inclusion as discriminative stimuli upon which the learner bases his or her actions.

Gibson (1991) tells us that the soldiers inflicting pain and suffering on others must disengage themselves morally from what they do. SLT, through what theorists call the "techniques of neutralization," acknowledges this type of learning as essential to those who violate laws and other norms. Any issue of al-Qaeda's *Inspire* magazine contains examples of this narrative. Trouble in the Muslim world, claim the magazine's authors, derives from a lack of sufficient faith and submission to the will of God. Al-Qaeda martyrs, under this system of logic,

are praised and glorified. Joscelyn (2014) described specific techniques for attacking the enemies of God, derived from al-Qaeda's "reading" of the Qur'an. This reliance on carefully selected, highly stylized, and contemporary messages (i.e., lessons), distributed via various media, constitutes an important recruitment tool for groups such as ISIS, a point to which we turn in the next section.

There are specific nonsocial reinforcements associated with joining militant groups such as Boko Haram, al-Qaeda, and ISIS. Recall the comment of the Swedish member of ISIS previously quoted. There is a rich body of literature about how battlefield violence can be appealing, fascinating, and even exciting, what psychologists call "appetitive aggression" (Elbert et al., 2010; Heckler, Hermenau, Maedl, Elbert, & Schauer, 2012; Weierstall et al., 2013). That is, the physical rush associated with combat—especially survival—is a discriminative stimulus that reinforces behavior and beliefs on both physiological and sociological levels, since, in the latter case, allied combatants share these feelings.

Most studies of appetitive aggression have involved soldiers and warfare, and indicate that appetitive aggression can reduce or eliminate symptoms of post-traumatic stress disorder (Schaal et al., 2014; Weierstall et al., 2012, 2013). Weierstall and associates (2013), for example, have argued that, with "proper" socialization into violence, combatants can come to enjoy perpetrating violence against others and can become increasingly cruel in their use of violence. A key factor in this socialization is age—the younger an individual is when socialized into a violent ethos, the more appetitive their aggressive behavior becomes. It is not surprising, therefore, that youths are highly targeted by recruiters for terrorist groups (Bhui, Warfa, & Jones 2014). Such an interpretation comports with SLT/SSSL.

Role of Social Media in Radicalized Learning

The meaning of "social media" in this context is critical. According to Coulson (2013, p. 1), "[s]ocial media are tools for social interaction, using highly accessible and scalable communication techniques—such as web-based, mobile technologies—to turn communication into interactive dialogue." As Dean and associates (2012) have suggested, the threat posed by online recruitment is significant (see Stein, 2011; al-Shishani, 2010; Weimann, 2010). There are no borders to be crossed, and no effective methods for intervention exist (Department of Homeland Security, 2010; Torok, 2010). Facebook allows terrorist organizations to recruit people from around the world, without posing any significant threat to the organization's security (Department of Homeland Security, 2010; Torok, 2010). Importantly, once people become members of the group, the organization can seamlessly transition into the next phase, training (Dean et al., 2012, pp. 109–110). According to Marcu and Balteneau, "… terrorist and extremist groups have become increasingly more present in the virtual world of the Internet, about 90% of organized terrorism on the Internet being based on social media" (2014, p. 167).

As Jenkins has so eloquently stated (1974, p. 4), "Terrorism is theater." Terrorists seek, quite simply, to create terror within a targeted population. Terrorism's purpose is to create such high levels of fear in an enemy government or its population, or in an enemy identity group, that they accede to the terrorists and their agenda, regardless of what that agenda may be. The spread of this fear requires that as many people as possible immediately witness the violent event. Terrorists tend to rely on mass media to spread this imagery, and increasingly use their own media creations, such as al-Qaeda's *Inspire* magazine or social media outlets such as Facebook and Twitter.

Due to attrition, terrorist organizations must constantly recruit new members, which can be difficult owing to security concerns. Every path through which a potential recruit can contact the organization is a path that the enemy can exploit. Terrorists and terrorist groups use mass and social media to target two different audiences. One target is the identity group that the terrorists claim to represent (e.g., American white Christians by the Ku Klux Klan or Sunni Muslims by al-Qaeda). The message to this group is one of oppression, victimhood, solidarity, and encouragement—the identity group is the victim of a powerful opponent, all members should stand together, and the terrorist group is the vanguard of resistance.

The second target is the perceived oppressor. The message to the oppressors is that they are not safe, that they or their loves ones can be killed at any time unless they concede to the terrorists' demands. We are concerned here with the first target. How do terrorist groups reach out to their identity group to recruit new members using social media? We can find a partial answer to this question in electronic versions of SLT's differential associations.

Differential Association

A review of the "digital footprint" of terrorists frequently lends support to the argument that differential association occurs online as well as in the "real" world. The case of Colleen "Jihad Jane" LaRose illustrates the means through which online associations are increasingly as important to one's identity as face-to-face human interaction (Halverson & Way, 2012). LaRose never attended a mosque, and never appeared in public wearing a hijab. She constructed her online identity as "Fatima" via MySpace. According to Halverson and Way, once online, LaRose:

> entered a stage of social liminality online and constructed a new identity as a member of a community that valued her participation. The normative social structures of her troubled daily reality were subverted by the Internet and the *communitas* she found in extremist circles that shared her scorn for American society. In this new reality, she was not only an important participant in a worldwide struggle encoded with profound transcendent status, but apparently valued romantically, which may reflect a longing for appreciation (2012, p. 141–142).

Other terrorists have left similar online footprints. Active participation in Facebook groups focusing on conspiracy theories, white supremacy, anti-government militia ideology, fundamentalist religions, jihadism, *inter alia*, provides the participant with access to ideology, instant "friends" in the group, a social network, justifications and mandates for violence, and explanations for the participant's unhappiness.

Coulson notes the following about the creation of community among online supporters and terrorists:

> There is a sense of community among users of social media. A reader of an article at Al Jazeera mobile is not necessarily part of a network involving other of the channel's website visitors; if the reader posts a comment about the article on Al Jazeera's blog (or on another blog or on the microblogging platform Twitter), he or she has entered an electronic community where user opinions and values are shared. Values and opinions are shaped and shared because digital posts spawn commentary, sway views and spur action (2013, p. 2).

This may not be a physical community where terrorists and their recruits can share ideas, values, motives, neutralizations, and philosophies; however, the emergent ether community is real, nonetheless, and its impact on *some* but *not all* who reside in it cannot be denied.

Imitation

Criminologists tend to view imitation as the least intellectually satisfying or empirically grounded part of Akers' theory (Akers, 1998; Akers & Sellers, 2012; Pratt et al., 2010). However, this valuable construct should be included in the exploration of the SSSL model's utility for studying terrorism, particularly the initial recruitment and early stages of indoctrination, and perhaps most especially when social media are involved. As Akers (1998) has observed, many researchers have excluded imitation from their studies, given that, when effective, "imitative effects are most likely to involve adolescents or younger population samples. Modeling is sometimes measured directly, but it is also inferred from parental behavior or *from exposure to media portrayals*" (pp. 110–112; emphasis added). Reporters often film children in the Middle East playing at war, but unlike children in other parts of the world who may engage in this activity, warfare is taking place within kilometers of their play areas, sometimes meters away. Members of domestic terrorist groups, such as the Aryan Nation, often have youth divisions, with very young children imitating the behavior of their elders, down to the costumes they wear and behavior they emulate.

Even among adult members of such groups, especially those seeking to expand their reach and impact, imitation may hold considerable cachet. Consider Martin's (2016, p. 221) description of the use of social media by terrorist organizations to promote both their message and method:

> During the 2001–2002 coalition campaign against the Taliban in Afghanistan and the 2003 invasion of Iraq, images of wounded and killed civilians were regularly and graphically broadcast throughout the Muslim world. Similarly, the Islamic State of Iraq and the Levant (ISIS) skillfully used social networking media to promulgate its fighters in battle and gruesome executions.

These images and videos led other jihadists around the world to copy their actions, down to the specific methods of execution, and then post their own videos, leading to an ever-increasing cycle of viewership, copycat violence, and broadcast.

Summary and Conclusions

SLT has proven to be one of criminology's most robust theories (Akers & Sellers, 2012), tests of which have tended to provide considerable empirical support, especially when contrasted with other criminological theories (Pratt et al., 2010). It is our contention that Akers' SLT, but especially the SSSL model, can help to inform those desiring to know more about violent terrorist groups and their recruitment of new members. In the study of serious group-context offending, few criminological theories offer the breadth and depth of explanatory power found in SLT. For example, over the past 20 years, SLT has been applied to the study of youth gangs, both in the United States (Winfree et al., 1994) and outside, and in cross-national contexts as well (Esbensen & Weerman, 2005; Weerman & Esbensen, 2005;

Winfree, 2012). Decker and Pyrooz (2015) urge those studying youth gangs and terrorists to pay attention to prison gangs, as gangsters generally leave prison far more organized and well-disciplined than they entered it. Decker and Pyrooz (p. 109) also cite work outside the United States as suggesting that prison helps to both radicalize individuals and create terrorists. The popular media, too, are beginning to notice links between gangs and radicals as well, including the ties between prisons, gangs, and terrorist activities in the wake of a shooting spree in Copenhagen, Denmark (Olsen, 2015).

Moule, Pyrooz, & Decker (2013) contend that there are significant similarities between youth gangs and terrorist groups, including the fact that both entities are composed primarily but not exclusively of young men, and that their violent actions tend to harm the public. Moreover, the level of violence employed is disproportionate to what both gang members and terrorists themselves experience (see, e.g., appetitive aggression), although terrorist groups clearly resort to a far higher and lethal level of violence than do members of the typical street gang. Gangs may lack the political ideology of terrorist groups; however, as it is behavior and not a group's socio-political norms that drive this chapter, the latter are interesting only insofar as they help to define the group's definitions and reinforcers.

Others have noted the inherent power and utility of learning theory as an explanatory model for the study of terrorist groups (cf., Akers & Silverman, 2004; Gibson, 1991; Weierstall et al., 2013; Wilmer & Dubouloz, 2011). We have taken this descriptive claim several steps forward. Our explication of SSSL as a viable model for how terrorists recruit new members and expand their hold on both current and prospective members has yielded new insights into these processes as well. Our inclusion of several concepts drawn from literature on child-soldiers and other terrorist groups that employ warfare as a weapon of terror extends key elements of the SSSL model, including culture conflict, radicalization, self-radicalization and radicalized learning, the discontent narrative, and appetitive aggression. We also suggested that the theory must include, as intended by Akers and others, the significance of both social media and the Internet generally for the learning process, something again supported by those who study youth gangs (Decker & Pyrooz, 2011; Moule, et al., 2013). While Sutherland had rejected these "impersonal agencies of communications" as of little consequence for his theory, researchers have subsequently found that, as a medium of learning, the Internet and social media have few peers (Coulson, 2013; Dean, Bell, & Newman, 2012; Marcu & Baltreau, 2014; Thompson, 2011; see Hill, Song, & West, 2009).

Social learning advocates have long contended that the theory has direct application, meaning society can use it to correct, modify, or change a condition that the community may view as undesirable. Zafar (2015) locates an understudied source of radicalism as existing within various counter-culture movements, against which parents are often ill equipped to provide an alternative message. Gerald Patterson and his associates (Patterson, 1975; Dishion, Patterson, & Cavanagh, 1992; Snyder et al., 2005) use social learning as the foundation for programs with families and youth peer groups, essentially providing families with the skills to counter the lessons of less prosocial groups and individuals within the social world of troubled children. These and other cognitive and behavioral programs have empowered parents and decreased antisocial behavior among younger at-risk youth (Dishion et al., 1992). For older at-risk and terrorism-involved persons, other programs based on cognitive-behavioral approaches may have promise as they address more than one risk and protective factor in a person's social world (Losel, 2007). As Cullen and associates (2003, p. 353) have observed about the utility of differential association/social learning

theory for changing the course of offenders' lives: "A consistent finding across meta-analyses, including cross-cultural studies, is that 'cognitive-behavioral' programs tend to achieve higher reductions in recidivism than other treatment modalities."

According to Post (2010), any anti-terrorist strategies born from a social learning perspective should include the following features: (1) inhibiting potential recruits from joining; (2) creating tensions within the group; (3) facilitating exit from the group; (4) reducing support for the group; and (5) de-legitimating the leadership of the group. Akers' SSSL model contains the theoretical underpinning, placing the locus of much of the community-based cognitive-behavior programming within those locales where one is likely to find at-risk individuals. Cognitive behavioral programming, which is designed, for example, to combat youth gangs and street-variety delinquency, may have to undergo considerable cultural grounding before it can be applied to such subpopulations in nations currently producing terrorist-combatants, or in which such conflicts emerge. The learning process is itself value-free, and the forces at work sustaining it should be the same, whether they are used in Los Angeles, California; Atlanta, Georgia; Mosul, Iraq; or Madinatul Islam, Nigeria. If we are to have any hope of controlling the spread and entrenchment of terrorist groups, then we must understand the sociological and psychological learning processes associated with becoming a terrorist, as we should be able to use the same mechanisms to help them unlearn this orientation and re-learn a more prosocial, productive one.

Theory rarely provides definitive answers as to how to respond to problems such as the ones addressed in this chapter. Nonetheless, theory can provide direction for those seeking such answers, and, in this context, social learning has been overlooked far too often as a starting point in this search till date. SLT provides a useful framework for understanding the radicalization process through which individuals are turned into terrorists. Future empirical research may wish to address, in particular, the roles played by free spaces and ideological isolation as mechanisms that inculcate definitions favorable to committing terrorist acts; such research should stand as a foundation to support or refute our assertions.

Notes

1   We do not address certain forms of terrorism in this chapter. For example, narcoterrorism has as its ultimate goal the expansion of an unregulated and uncontrolled drug business; this is too constricting as we seek generally to understand how people become terrorists, irrespective of the underlying form or intent. There are terrorists-for-hire motivated by greed alone, and revenge-motivated terrorists such as Chechnya's "Black Widows," but these are a small minority and not addressed in this chapter.
2   Futrell and Simi (2004) has explored this notion of isolation in depth in their study of American white supremacists. They found that "an important variable in assessing movement viability is the capacity to establish free spaces where members communicate, reinforce, materialize, and celebrate their ideology and collective identity" (p. 39).

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The Situational Approach to Terrorism

Henda Y. Hsu and Graeme R. Newman

Introduction

In their pioneering books *Superhighway Robbery* (Newman & Clarke, 2003) and *Outsmarting the Terrorists* (Clarke & Newman, 2006), Clarke and Newman demonstrated how situational crime prevention (SCP) could be adapted to explain cybercrime and terrorism and, more importantly, how its unique approach to crime problems could provide detailed accounts of how to respond to these problems and to counter them. In recent years, SCP has been applied to a wide array of crimes that are either on the fringe of traditional criminology or, indeed, completely new to it, such as wildlife crime, Internet child pornography, human trafficking, tax evasion, cigarette smuggling, and many others (Freilich & Newman, 2016).

SCP and Terrorism

The adaptability of SCP to all forms of crime, no matter how serious or complex, also applies to explaining and preventing terrorism. SCP approaches all events—criminal or otherwise, violent or not—as situations that occur within particular environments (Freilich & Newman, 2009). In fact, SCP does not really need to call an event a "crime" or "terrorist attack," even if legally it may be so defined. This is because SCP looks on crime and terrorism as resulting from a series of actions connected by actors who act reasonably (from their own points of view) to get from point A, the beginning of the journey to the terror event, to point B, the consummation of the event, the result of many choices and decisions made along the way. This approach can be applied to understand why and how any events occur, including even accidents. Thus, what we call these events is not really important. It is how we analyze the situations and actions that occur in particular environments that matters.

This means that, with respect to terrorists, it is not their political, religious, or ideological motivation that is crucial to understanding them. SCP simply assumes that all offenders, whether terrorist or criminal, are committed to seeing their action through from beginning

to end. In the case of terrorists, their ideology is most often obvious and certainly supplies a level of commitment. For common criminals, their "ideology" is not so apparent, though their commitment to seeing through the crime always is, or at least we assume it, given a successful crime. In sum, it matters less what the overall motivation is. What *does* matter are offenders' *immediate* motives: what are offenders trying to achieve in order to carry out their crime or terrorist attack? What opportunities are available for actors to exploit in order to gain some kind of advantage? The terrorist simply wants to reach the target as efficiently and effectively as possible. We may say that it is the terrorist's immediate and predominant *motive* (as against motivation) to reach and destroy the target.

Finally, the question of who or what organization is behind the terrorist attack is not of immediate concern to SCP. What is of concern, of course, is how or whether the terrorists (or criminals) are organized, and how this affects their selection of and journey to the targets. It is that operational knowledge rather than the more distant context within which they operate that is of immediate importance to the SCP approach. SCP has shown, for example, that supply chains are crucial for routine terrorism such as the suicide bombings that occurred in Israel before and during the Second Intifada. It is a matter of emphasis. In short, SCP is focused on *how* terrorists organize themselves and what they must do to carry out a successful attack.

The Intersection between Crime and Terrorism

The obvious intersection of SCP with terrorism is, of course, that of targets, since they are central to most if not all terrorist attacks. Targets have always been in the forefront of SCP, whether in respect to choosing a house to burgle, a bank to rob, a car to steal, an item to shoplift, or a person to victimize. "Target hardening," the first in the grid of the renowned "25 techniques" of SCP (Clarke, online), has become a common expression in the lexicon of policing and security. In *Outsmarting the Terrorists*, Clarke and Newman applied a novel approach from the SCP work on stolen goods, that of the idea of "hot products" (Clarke, 1999)—answering the question "what attracts thieves to particular kinds of products (targets)?" The schema developed by Clarke and Newman to reveal the characteristics of targets that attract terrorists to them is summarized by the acronym "EVIL DONE":

- *Exposed*. In 2011, the campers on the island of Utøya, Norway, were sitting ducks to a lone wolf shooter using a .223-caliber Ruger Mini-14 semi-automatic carbine.
- *Vital*. Electricity grids, transportation systems, and communications are vital to all communities. Transit systems such as the London Underground and the New York City Subway have been perennial targets.
- *Iconic*. The target is of symbolic value to the enemy—for example, the plot to blow up the Eiffel Tower, uncovered in 2014; the attack on the Taj Mahal Palace Hotel, Mumbai, in 2008.
- *Legitimate*. Terrorists' sympathizers—those who legitimize their actions—cheered when the Twin Towers collapsed.
- *Destructible*. After a failed attempt with a truck bomb, with the right weapon, the Twin Towers were finally destroyed on 9/11.
- *Occupied*. To underscore their commitment to violence or the threat of violence, terrorists are inclined to select targets that are occupied by people. While some terrorists have exercised constraint in their targeting of occupied targets (e.g., the IRA and ETA warning the public about impending attacks), terrorism has become more deadly over

the past four decades (LaFree, Dugan, & Miller, 2015). Many of today's terrorists want a lot of people dead (Jenkins, 2006), and densely occupied targets, such as crowded subway cars, promise a lot of "bang for the buck."

- *Near*. Terrorists prefer to attack targets that are within reach of their home base. A hidden terrorist's place of legitimate employment (the beheading of a co-worker at a food processing plant in Oklahoma in 2014) highlights the importance of proximity to the target.
- *Easy*. The Murrah Federal office building in Oklahoma City was an easy target for a car bomb placed within 8 feet of its perimeter on April 19, 1995.

In theory, terrorists could attack any target. In practice, they choose their targets carefully according to the factors summarized by EVIL DONE. Of these target characteristics, Clarke and Newman (2006) argue that the proximity of the target to the base of operations (*Near*) is probably the most important. The reason is that, the closer the base of operations, the more detailed information that can be collected concerning the accessibility of the target and the route to the intended attack. Street and traffic conditions, for example, may be significant in carrying out a suicide bombing. If a target is distant, it will be much more difficult to obtain the necessary operational information. This is why most al-Qaeda–affiliated attacks against the United States, except the attacks on the World Trade Center, have been conducted against US targets overseas, most commonly embassies and military bases. These targets were generally much closer to the bases of operations of al-Qaeda. In the case of the al-Qaeda attacks on the World Trade Center in 1993 and 2001, it was necessary to set up satellite bases close to the targets. Subsequent successful and failed attempts in the United Kingdom and United States have revealed that attacks inspired by al-Qaeda and its affiliates have been carried out by individuals who were born of immigrant parents within the target country, and received training in terrorist camps overseas. Thus, the traditional distinction between domestic and foreign terrorism no longer holds, but the necessity of proximity of the terrorist base of operations to the target remains significant. It is also an obvious point that if US and other troops are stationed in regions close to terrorist bases and activities, this amounts to providing terrorists with many more accessible targets. We might speculate that, the more the United States provides targets overseas, the more likely they will be attacked, and the less likely that operatives will attack targets on US soil (see displacement, in the text that follows)—unless, of course, they are lone-wolf, home-grown terrorists who live or work close to their targets. The Fort Hood shooting at the US Army base in Texas in 2009 is a clear example of the latter. It is yet to be seen whether American participants with ISIS will, after serving their time in the Middle East, "retire" to their home country and carry out attacks there. The presence of ISIS on social media and the Internet is now widespread, and its propaganda recruitment methods are highly sophisticated. It is apparent that the rising influence of social media and other facilities of the Internet help to overcome the problem of distance from the target, which also explains why lone-wolf attacks are very much welcomed by terrorist organizations who do not as yet have an organizational foothold within the United States.

Choice

Terrorists are faced with many choices. What choices must be made in order to reach the target and complete the mission? As noted earlier, the focus of SCP is always on how an offender carries out the crime. To reach the target, the adept or "qualified" offender must

choose the right tools and weapons for the job. What weapons will the terrorist use, and what tools will be needed to reach the target? According to the Global Terrorism Database (LaFree, Dugan, & Miller, 2015), some 88% of all terrorist attacks from 1970 to 2012 used either explosives or firearms. The choice of weapon will be conditioned by a number of factors that may be summarized by the acronym "MURDEROUS" (Clarke & Newman, 2006):

- *Multipurpose*. A high-powered, single-action rifle has a specific use, while explosives have a much wider application.
- *Undetectable*. Semtex or its equivalents are small, lightweight, and largely undetectable explosives, ideal for penetrating layers of security. Where person-to-person assassinations are concerned, various knives and guns that can be concealed are, of course, preferable. In 2001, a bomb hidden in a video camera by al-Qaeda operatives posing as reporters killed Ahmad Shah Massoud, an Afghan political and military leader.
- *Removable*. The weapons of terrorism must be portable, so they must be relatively light and reasonably small, unless transportation is available below.
- *Destructive*. Explosive devices have a greater kill rate than guns targeted at specific individuals, though modern guns can effectively kill multiple victims, as lone-wolf attacks have shown in recent years.
- *Enjoyable*. Terrorists are clearly attracted to their weapons and will, when they can, use their favorite weapon over and over again.
- *Reliable*. If terrorists have used a weapon, or one like it, many times before, they are likely to favor that weapon over another because of its proven reliability.
- *Obtainable*. How easy is it to get the weapon? Can it be bought or stolen easily? Or can it even be manufactured in-house? Explosives such as Semtex or C-4 for use in suicide bombing vests are difficult to get in the United States. High-powered guns and rifles are not. Thus, the Fort Hood shooting was accomplished with a gun, and not an explosive. Anders Behring Breivik, the Norwegian lone-wolf killer, had traveled around in Europe to find the weapon he wanted.
- *Uncomplicated*. All weapons require practice and training. A weapon that demands considerable skill, such as a free-flight armor-piercing missile launcher, will rarely be used.
- *Safe*. The use of bombs as weapons is inherently more dangerous than the use of other weapons, especially when made in-house. But they remain the terrorist weapon of choice because they are so destructive.

We can see from the preceding text that the choice of the target and the weapon to attack it with will depend on a number of characteristics that are intrinsic to the targets themselves, the weapons, and the type of attack the target itself demands. For example, if an assassination is called for, then a weapon that can precisely hit that target is needed. However, what is important is that the terrorist achieve some, preferably much, familiarity with both the target and weapon. Practice may be necessary in getting to the target, finding the right route, and gaining access. Much time will be needed to both acquire the weapon of choice and learn how to use it effectively.

All of these preparations require of the terrorist to embark on actions that are probably of greater risk to the terrorist than getting caught during the attack itself. Transportation (getting to the target) is a common everyday activity that must be done to reach any target, and thus exposes the terrorist to the public. Obtaining guns, explosives, and paying for them leaves a trail that can be traced. Communication, especially by mobile phone is also a

common, ordinary activity that exposes the terrorist to public view. In sum, the tools the terrorist will choose will depend on the type of attack, but generally will require:

- Phones or other means of communication such as email or social media
- Cars or trucks to transport themselves and weapons
- Cash or (false) credit cards, bank accounts, or other means of transferring money
- Documents (false or stolen)—for example, drivers' licenses, passports or visas, and vehicle registration documents
- Maps (and GPS, increasingly), building plans, and addresses, so that the target location can be pinpointed
- Television sets and monitors
- Video and still cameras for surveillance
- Internet access to collect information on street closures, traffic patterns, weather conditions, local news, and to disseminate propaganda worldwide

It may seem obvious that terrorists would need these everyday tools, but it is not obvious how they can use them without divulging at some point who they are. Using cash instead of a credit card to rent a car, for example, draws unwanted attention to the terrorist. Using a credit card exposes one's identity—unless it is stolen. For these reasons, terrorists steal many of the everyday tools that are widely available, which of course opens them up to the risk of getting caught. This is why there is a considerable, and increasing, overlap between terrorism and "traditional crimes" such as money laundering, drug trafficking, car theft, and even bank robbery—a favorite way of the Irish Republican Army (IRA) to raise money, and now eclipsed by total bank takeover by ISIS in Iraq.

Facilitating Conditions

Attractive targets, appropriate weapons, and the right tools are the basic necessities for terrorists to plan and carry out their attack. However, even if these necessities are met, the terrorist needs, and looks for, conditions that will facilitate his *modus operandi*. For example, in some locations, regions, or countries, laundering money through banks may be much easier, and guns or explosives may be more widely available. Failed states, for example, are a favorite operating base of terrorists, and, in some cases, the terrorists do their best to make a state fail (Gould & Pate, 2015). These, then, are the conditions that facilitate the operations of terrorists, and they may be summarized by the acronym "ESEER":

- *Easy*. When local officials are susceptible to corruption
- *Safe*. When ID requirements for monetary or retail transactions are inadequate
- *Excusable*. When family members have been killed by local anti-terrorist action
- *Enticing*. When local culture or religion endorses heroic acts of violence
- *Rewarding*. When financial support for new immigrants is available from local or foreign charities

Globalization also contributes to these facilitating conditions—by facilitating and encouraging, for example, the worldwide marketing of small arms, whether legal or illegal; porous borders between countries that make movements of terrorist operatives easier; proliferation of nuclear technology and other toxic materials that create opportunities for

terrorists to obtain or manufacture WMDs; and lax international banking practices that facilitate money laundering. The global reporting of savage or violent terrorist attacks on mass media and the Internet has also probably facilitated terrorist recruitment into various terrorist organizations.

The Line of Least Resistance

Attractive targets, available weapons, and the right tools and conditions that facilitate their use come together to create what, for the terrorist, becomes the line of attack, the line of least resistance. It is important to note that we can only go so far in identifying the characteristics of targets, weapons, tools, and facilitating conditions to make some predictions of how and where terrorists will strike. These predictions depend on the terrorists behaving in a normal manner, that is, that they are not creative, but are creatures of habit. We do know, however, that criminals who are very good at what they do, such as, for example, professional car thieves, will eventually find a way around barriers that are placed in their way. For example, in the case of car theft, steering wheel locks worked well until offenders figured out a way to neutralize them. Immobilizers currently work well to stop car theft, but some thieves have already found that they can take a different route and steal identities of individuals and of cars so as to make immobilizers irrelevant. The 9/11 attacks demonstrated that creative terrorists could find a way to get around the standard air travel security procedures—by using the planes themselves as weapons. Security officialdom had never seriously considered the possibility that operatives would be prepared to kill themselves in order to crash the planes into the World Trade Center, even though some had envisaged such a scenario. Once the terrorists commandeered the planes, the way to the target was open to them.

These adaptations of offender behavior in response to security interventions have led some critics of SCP to claim that placing barriers and other security interventions to thwart terrorist attacks is useless, since the terrorists who are highly motivated by their cause will simply move to a different target or use a different weapon, always finding the line of least resistance. This supposed reaction of terrorists to security interventions is called *displacement*.

Displacement and Terrorism: the Critique of Situational Prevention Measures

In light of comprehensive reviews of SCP (e.g., Guerette & Bowers, 2009; Hesseling, 1994), the longstanding refrain in the terrorism literature that situational counterterrorism measures are passive, piecemeal strategies that only serve to divert terrorist attacks elsewhere is now being questioned by SCP researchers. The assumption in both crime and terrorism literature has been that SCP-based blocking of opportunity will in no way diminish the determination and motivation to offend, and that plenty of alternative opportunities will always be available to criminals and terrorists (Enders & Sandler, 2006; Hamilton-Smith, 2002). T. A. Reppetto (1976) first introduced the notion of criminals moving to other locations, time periods, or other types of crime to continue their offending in response to focused crime prevention efforts. However, drawing on an extensive body of work underscoring the efficacy of crime prevention through situational interventions, SCP scholars have much to offer in the understanding of the displacement of terrorist attacks.

Understanding Displacement

Characterizing the displacement of terrorist attacks as the "substitution effect" (i.e., displacement), terrorism scholars have argued that, while situational or defensive anti-terrorism measures that increase the cost of a terrorist act lower the demand associated with that activity, they concurrently raise the demands associated with activities whose costs have remained constant and, because its relative costs are now cheaper, terrorists would segue into these other kinds of terrorist operations (Enders & Sandler, 2004; Im, Cauley, & Sandler, 1987; Sandler, Tschirhart, & Cauley, 1983). Consequently, the findings by Enders and Sandler (1993)—that terrorists' *modus operandi* transitioned into other hostage-taking attacks and assassinations following the fortification of airports and US embassies—have produced a lasting skepticism among terrorism researchers, policy makers, and the public toward the utility of situational counterterrorism efforts.

As we have previously discussed, however, the line of attack for terrorists is crucially dependent on features of targets, weapons, and facilitating tools and conditions. As such, recent studies applying SCP to terrorism have revealed more clearly how, if at all, the displacement of terrorist attacks occurs, by observing that substituting attacks is more complex than commonly assumed (Clarke & Newman, 2006; Hsu & Apel, 2015). It involves the balancing of anticipated costs and rewards in relation to the capability of the terrorists, and in interaction with the daily arrangements of society that offer opportunities for terrorists to exploit (Cornish & Clarke, 1987; Ekblom, 1997). With this in mind, then, the situational view of terrorism displacement is guided by the following considerations (expressed by the acronym "CARDS"):

- *Competence*. When questioning the claim that displacement is an ineluctable outcome of situational interventions, Clarke and Newman (2006) caution that it may be erroneous to assume that terrorists or terrorist groups are equally competent or knowledgeable about all forms of attacks. In their reasoning, the authors highlight findings in SCP which revealed that most offenders have limited enthusiasm to offend in locations outside their domain; in environments where they may stand out; and in areas where they do not know the layout, escape routes, or level of police activity (Ratcliffe, 2002). Hence, when changes are imposed upon the criminals' regular offending patterns by situational interventions, they may be removed from their preferred way of offending with which they were the most proficient. On the edge of their offending repertoire, there is a familiarity decay for the offender, and, if similar methods of offending can also be blocked, displacement becomes unlikely, and there may be a desistance from criminal activity altogether (Barnes, 1995; Eck, 1993). In short, displacement is reserved for those terrorist groups that possess adequate knowledge about various forms of attacks and sufficient familiarity with alternative opportunities.
- *Adaptation*. Security measures eventually wear out, and thus we must continually review our vulnerabilities and renew our defenses. As previously mentioned, professional car thieves devised ways around anti-theft measures, and the 9/11 terrorists used airplanes as weapons for their attacks. While adaptation or innovation by terrorists and criminals speak to their gradual learning and creativity, it is important to bear in mind that this long-term process is a separate response to situational interventions than the immediate change in offenders' behavior designed to displace their offending (Clarke & Newman, 2006; Hsu & Apel, 2015). Both these gradual and immediate adaptations in behavior are

put into motion by an effective intervention, blocking the terrorists from carrying out their original plan of attack. From here, the terrorists can either immediately turn their attention to a substitute mode of attack, or devise new ways over time to defeat the security measures in order to continue attacking their favored target.

- *Resources*. Carrying out an alternative attack exposes terrorists to greater risks of capture owing to the reduced familiarity with their replacement targets, weapons, tools, and conditions. To surmount these increased costs associated with displacement, terrorists need a greater precision of the confluence of resources (e.g., funding, personnel, training) and competence to create a new or modified line of attack. In other words, displacement requires a high level of capability (resources plus competence)—terrorists need to be capable of matching their skills and resources to the tasks needed to succeed in the particular environment available to them.

- *Diffusion of benefits*. In their evaluations of SCP studies, SCP researchers observed unexpected reductions in crime not directly addressed by situational preventative measures. Rather than displacing crime, interventions were found to have additional success beyond their anticipated reach. In fact, this unintended consequence was found to be just as likely to occur as displacement (Guerette & Bowers, 2009). Called the "diffusion of benefits," Clarke and Weisburd (1994) identified the two main processes that engender the spread of beneficial influence from situational prevention strategies as deterrence and discouragement. For deterrence, offenders generally overestimate the crime prevention efforts, and their perception of apprehension or punishment is much higher than reality (Weisburd et al., 2006). As a result, criminals may desist from certain types of offenses, and from offending in locations and periods of time outside the purview of the prevention measures (Barclay, Buckley, Brantingham, Brantingham, & Whinn-Yates, 1996). This can also be accomplished when offenders are discouraged from committing a crime because the costs of carrying it out will no longer be sufficiently compensated by the anticipated rewards (Clarke & Weisburd, 1994). The reason is that not all crimes are equally rewarding, and thus, once the opportunities to commit an offense are blocked, the costs of perpetrating other, less preferred, illegal endeavors may not be judged worthwhile to the offender.

- *Survival*. Clarke and Newman (2006: 71–72) showed that the majority of terrorist groups disintegrated within the first few years of their existence, and this finding has been generally confirmed in subsequent studies. In studying the survival patterns of terrorist organizations between 1970 and 2010, Young and Dugan (2014) found that approximately 70% of terrorist groups ended operations within their first year. Furthermore, only 20% of terrorist groups are expected to survive after 5 years (Dugan, 2012). Taken together, we see that only relatively few terrorist organizations have the longevity to expand and improve their capabilities to successfully carry out multiple attacks, and to be able to substitute among them.

Diffusion, Displacement, and Counterterrorism

In applying a situational model to examine the reaction of terrorists to increased airport security measures, Hsu and Apel (2015) demonstrated that the situational aspects of terrorist behavior (as outlined in CARDS earlier) significantly influenced the nature of the terrorist's response. Following the introduction of airport metal detectors, the authors found that, while a reduction in airliner hijackings—the explicit target of the

intervention—was observed, terrorists were also deterred from carrying out other forms of aviation terrorism, such as attacks against airports and airlines. This recalls the situational argument that offenders typically have incomplete knowledge of the extent of situational prevention measures. A diffusion of benefits was further noted by the authors when terrorists were discouraged from being involved in other forms of non-aviation terrorism, such as hostage-taking incidents and diplomatic attacks. Hsu and Apel (2015) suggested that, once prevented from hijacking airplanes, other forms of hostage-taking events were deemed unsuitable by the terrorist groups. The issue of substituting other methods, targets, or tools is also complicated by the fact that various types of attacks may be complementary—i.e., a combination of different attacks is required to achieve one or more basic result(s). Thus, when a complementary event is reduced, all complements are decreased (Enders & Sandler, 1993). As such, Hsu and Apel suggested that airline hijackings may be connected with attacks against diplomatic targets or assassinations to incite a harsh government response. In turn, terrorist groups can use these acts to justify their own hostilities and gain support for their missions.

In addition to this diffusion of benefits, Hsu and Apel (2015) found that there was apparent displacement from aviation to non-aviation attacks with similar profiles and attractive targets—for example, transportation targets and infrastructure attacks. Upon further inspection, the authors found that almost all of the displacement observed in their study was attributed to the Irish Republican Army (IRA), a terrorist group that has been in existence for many decades, during which they have greatly developed and improved their learning and capabilities (Drake, 1998; Jackson et al., 2007).

In sum, SCP studies and its recent application to terrorism inform us that displacement is not a foregone conclusion. If the "CARDS" are right, then it is possible for displacement to occur. Yet, we should not be seized with the all-too-common fear that, in spite of security interventions, terrorists are unstoppable—they can attack at will anytime and anywhere. Rather, we should remember that their lines of attack and paths of displacement are, to a certain degree, predictable. Following the path of least resistance, capable terrorists may displace to other modes of attack that are logistically alike, perceived to be critical to their goals and preferences, and fulfill similar purposes.

Future Research

Future research could benefit from exploring whether terrorists specialize or generalize in their attack patterns and how that may influence their response to security interventions. The assertion that terrorists follow a line of attack points to a specialized attack portfolio—within which terrorists operate and displace their attacks based on opportunity structures, situations, and circumstances that give rise to distinct attack behaviors and a specific mix of terrorism types. Nevertheless, there is a notion in crime research (Gottfredson & Hirschi, 1990) that offenders can be generalists and engage in a wide assortment of crimes, so that an offender's criminal history may include property crimes, violent crimes, drug crimes, etc. Thus, it is possible that being competent in a large variety of terrorist activities may lower the threshold to substitute an attack in place of one that has been thwarted (Hsu & Apel, 2015).

However, versatility and specialization need not be mutually exclusive, since both may typify terrorist careers. In its capacity to explain both extremes, *rational choice theory*,

which underlies SCP, suggests that offenders engage in clusters of behaviors that offer similar benefit rather than in a specific offense type. And, as the needs of offenders progress, more versatile offending could emerge to satisfy their newfound needs (Guerette, Stenius, & McGloin, 2005). With this line of thought, future research may bring a sharper focus to the "attack portfolio" of terrorists by understanding how motives coalesce with situational conditions and constraints to give rise to explicit lines of attack and responses to preventative measures to satisfy specific needs. Moreover, future research can explore how attack versatility and specialization evolve as a function of the associations between needs and opportunity structure. In all, integrating the motives of terrorists, organizational attributes, and the situational context will expand our understanding of the impact of counterterrorism efforts and their effect on the trajectories of terrorist behavior (LaFree & Dugan, 2009).

Besides looking at the number of attacks, future research can assess the impact of displacement by examining whether the harm produced by the displaced terrorist attack is less than or more than what existed before the intervention. This draws from the idea of benign and malign forms of displacement (Barr & Pease, 1990). Benign and malign terrorism displacement can be determined, for example, by looking at whether subsequent attacks result in more or less injuries and deaths. Clarke and Newman (2006) pointed out that, in situations where terrorists have but one opportunity to carry out an attack, they may seek to cause as much damage or harm as possible. Hence, in a constrained environment where the number of attacks decreases, terrorists may seek to maximize fatalities in order to obtain the most "bang for the buck." Alternatively, terrorists' attacks that are not their preferred attacks may have less harmful consequences (e.g., property rather than personal damage) as a result of an SCP intervention, so benign displacement has occurred even though a terrorist attack or attacks have also occurred. Simply counting the number of attacks, without taking into account their impact, may therefore lead to misleading conclusions or misunderstanding the role of displacement in preventing terrorism.

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Victimization Theories and Terrorism

William S. Parkin

Introduction

Criminological theories of victimization offer terrorism researchers a blueprint to analyze and understand ideological victimization. These theories examine the attributes of crime victims, the locations where they are victimized, and the situations in which the criminal events occur, in order to develop a model of victimization that expands outside of the traditional focus of the criminal offender. The major theoretical perspectives used to evaluate the relationship between crime and victimization include routine activity theory, lifestyle theory, and opportunity theory (Meier & Miethe, 1993; Lauritsen, 2010). These theories attempt to answer questions such as: Are there situations or activities that individuals engage in that increase their risk of victimization? Are individuals of a specific sex, age, race, income, or educational level at a higher risk of victimization because they disproportionately engage in behaviors, or have routines, that place them at an elevated risk for being the victim of a crime? Relatedly, do criminals, whether ideologically motivated or not, tend to target specific locations at specific times more often than others?

For criminological theories of victimization to be applicable to terrorism research, however, researchers must first accept that terrorism, at least in part, is a criminal act. Rosenfeld (2004, p. 20) states that "Terrorism is moralistic or justice-oriented violence accomplished by predatory or 'criminal' means." Even if all cannot agree on how to frame the underlying motives of terrorists, it is not difficult to acknowledge that the violence is, at its very basic element, a crime. Unfortunately, even with this direct connection, empirical studies examining victims of terrorism, extremism, or other forms of ideologically motivated crimes through the lens of criminology are scarce. One reason why little research has been conducted is owing to the fact that terrorist events are rare and the population of victims relatively small when compared with other forms of violence. Even when including the attacks of September 11, 2001, and the Oklahoma City bombing, there were 3,482 individuals killed in the United States from 1970 to 2013 (National Consortium for the Study of Terrorism and Responses to Terrorism, 2014). In comparison, during that same period, more than 830,000 homicides were reported to the United States Department of Justice (2015).

The rarity of these victimization events makes it difficult to systematically identify, collect, and code data, and only a few data collection efforts related to terrorism have victim-level data. In addition, definitional issues used to describe acts of ideologically motivated violence, such as terrorism, extremism, and even hate or bias crimes, are not universal. This makes it difficult to select incidents, and therefore victims, that are universally agreed upon as representative of these phenomena. Also, the assumption that victims of ideologically motivated violence are random, or indiscriminate, has limited scientific inquiry into terrorist victimization (Savitch & Ardashev, 2001; Damphousse, Smith, & Sellers, 2003; Canetti-Nisim, Mesch, & Pedahzur, 2006).

The purpose of this chapter is to present the current state of criminological research on terrorism victimization. The chapter begins by discussing whether or not we should assume that victims of terrorism are random. Next, it outlines several criminological victimization theories before focusing on the few instances where they have been applied to terrorism. Datasets that can potentially be used to study terrorism victimization are identified, and their potential application to victimization research is reviewed. Finally, the chapter ends with guidance for how future research can address the mostly unexamined phenomenon of ideologically motivated, violent victimization.

The Non-randomness of Terrorism Victimization

In 1976, Cooper divided the victims of terrorism into two categories, those who are targeted for who they are or what they represent, while the "second class of victims is the true unknown, the innocent, random target selected and interposed by the relentless march of destiny itself (p. 233)." Fattah (1979, p. 82) agrees with the prior assessment, stating that:

> there are reasons to believe that victims of crime in general, and of terrorism in particular, are not randomly chosen but are carefully and meticulously selected…But aside from those terrorist incidents…where victimization is either random or accidental, the dominant patterns seems to be that of a selected victim.

It could be argued that even these random or accidental victims are attacked while in a location of some significance to the terrorist, whether it be as specific as a government building or as vague as a crowded street in a Western country. The existence of patterns, however, may depend on how one conceptualizes randomness (Fattah, 1979). Researchers have stated that a terrorist incident:

> is typically called indiscriminate or "random" terrorism because it makes no distinctions among the individual identities of its targets. In another sense, however, such terrorism is very discriminate, being directed against specific categories of people and not others (Goodwin, 2006, p. 2031).

In other words, victims who appear to be "random" were not chosen for who they are, but for what they represent. Similarly, Schmid and Jongman (2005) state that:

> terrorism is a method of combat in which random or symbolic victims serve as an instrumental *target of violence*. These instrumental victims share group or class characteristics which form the basis for their selection for victimization (p. 6).

Even though these scholars acknowledge that most acts of terrorism are not truly random, the idea of randomness is still ingrained in both our popular and academic understanding of ideological violence. In research examining how terrorism is defined, Schmid and Jongman (2005) found that 21% of the terrorism definitions they surveyed included at least one of the following terms: arbitrariness, impersonal, random character, and indiscrimination.

In the few empirical studies conducted, there is evidence to suggest that victimization is not random, and that it is therefore an important aspect of a terrorism event to study. Parkin, Freilich, and Chermak (2014) attempted to stratify randomness into varying levels when examining victims of fatal, ideologically motivated murder. This measurement of randomness captures the nuances that occur with terrorism victimization, and to acknowledge that, although some victims truly are random, many are targeted specifically, or victimized for what they represent. The research demonstrated that 40% of victims of extremist violence were purposefully targeted; slightly more than 59% were killed because of what they represented; and less than 1% of the victims studied were random in the purest sense of the term. An example of purposeful targeting is an offender who kills a doctor who provided abortions at a medical clinic—the offender knew the doctor provided this medical service, and selected him or her for that reason. A representative targeting example includes an African-American victim killed by a white supremacist because he or she is black, even though the offender did not know his or her victim, and any individual who fit the targeting criteria would have been acceptable. In the first instance, we can think of the victimization event as a targeted assassination, while the second victimization event is one of ideological opportunity.

Other studies have tested whether victims of terrorism are random by directly testing the randomness hypothesis, which "places all segments of society at equal risk, ultimately heightening the capacity of intimidation" (Canetti-Nisim, Mesch, & Pedahzur, 2006, p. 486). The authors' alternative hypothesis was that victimization risk varied as a result of one's routine activities. Although only comparing victims of suicide attacks to victims of other forms of terrorism, they found that victimization was not random, and that there were differential risks of victimization based on demographic characteristics.

Berrebi and Lakdawalla (2007) found that the risk of being a victim of a terrorist attack is not shared equally by all members of society, and, therefore, is not random. Risk of victimization rises with population density, attractiveness of target, and the size of ethnic populations. In ideologically motivated violence, there appears to be selection criteria for the targeting of victims. Although these selection criteria are driven by the terrorist's ideology, targets and victims may be attacked because of their actual or perceived association with a specific race, ethnicity, religion, or nationality (Fattah, 1979). Therefore, if terrorism victimization is not random, and terrorism can be considered a form of predatory criminal behavior, then criminologists should utilize their victimization theories to conduct research and inform policymakers in an attempt to reduce the risk of ideological victimization.

Victimization Theories and Criminology

Criminology has produced theoretical frameworks that help to make sense of crime victimization, and researchers of ideologically motivated violence can utilize these bodies of work to help explain victimization patterns. The purpose of this section is to present the major

theories and constructs that researchers use to model victimization risk. These theories are unique in criminological research because they incorporate attributes and actions of the victim into an explanatory model of crime. Some criminologists, however, question the degree to which a victim's actions should be analyzed, and how much it implies that individuals are responsible for their own victimization (Lauritsen, 2010). This line of research inherently identifies times, places, and behaviors that can elevate a person's risk for victimization. If this increase in risk is known and could be alleviated, does it place blame on a person for his or her victimization if he or she knew about that risk, but did not take steps to mitigate it? One could defend these critiques by arguing that understanding the situational context of a crime, even if part of that explanation involves a victim's behavior, is not placing blame on the victim, but creating a complete picture of how a crime unfolds. Victimization research is important because, as most crime research is offender-centric, it ignores the dynamics between the offender and the victim, the victim and the community, and even the victim and location where he or she are victimized. As noted, in criminology, the more frequently studied theories related to victimization include routine activity theory, lifestyle theory, and opportunity theory (Birkbeck & LaFree, 1993; Lauritsen, 2010). These theories posit that the amount of risk a person assumes through his or her daily lifestyle and routines can increase their chances of victimization.

Lifestyle, or lifestyle-exposure theory, was one of the first victimization theories in criminology, originating from Hindelang, Gottfredson, and Garofalo's classic work that developed a theory of personal victimization (1978). In its original formulation, routine activity theory argues that directly related to crime rates are the convergence of a suitable target, a motivated offender, and the lack of a capable guardian in the same spatial and temporal location (Cohen & Felson, 1979). Soon afterward, opportunity theory developed with the addition of an important measure to routine activity theory—the victim's amount of exposure to an offender (Cohen, Kluegel, & Land, 1981).

In addition to these victimization theories, Meier and Miethe (1993) list concepts inherent within most explanations of victimization risk, including an individual's proximity to crime, his or her exposure to crime, the attractiveness of a target (whether an individual or location), and the effect of guardianship. Also, differences in demographic characteristics—such as age, gender, and employment status—can alter an individual's lifestyle, in turn causing variation in his or her exposure to individuals and places that increase his or her risk of victimization.

These characteristics, however, do not uniformly increase or decrease the risk of all victimization, and can vary based on the crime type. For example, an individual's risk of violent victimization may differ for homicides, assaults, or robberies. Something that helps explain homicide might not explain robbery victimization. Even within the same crime type, violent victimization risk may vary. An individual's risk of being killed in a domestic-violence-related incident is not the same as his or her risk of being killed during an armed robbery. Although, theoretically, relevant measures may be able to explain this variation in risk, these explanations are different across crime types and subtypes. This is an important point for terrorism researchers to keep in mind when researching the victims of ideological violence. Victimization risk and patterns for individuals targeted by Far Right extremists may not be the same for individuals targeted by jihadists. This also means that the policy implications that flow from studies of victimization risk will not necessarily be consistent across ideologies. This point underlines the importance of victimization studies that do not lump all types of ideological violence into one population.

Research that studies criminal events has also examined rational choice theories (e.g., Clarke & Felson, 1993). Although not victim-centric, these theories are based on the underlying idea that offenders will make decisions based on a rational cost–benefit analysis (Becker, 1968). Routine activity theory and situational crime prevention implicitly support this concept of a rational offender, but also incorporate victim and target characteristics into their calculus (Clarke, 1980; Cohen & Felson, 1979). If the characteristics of potential victims and targets are known, then policies can be put in place that increase the potential costs to the offenders by better protecting these targets or even increasing the punishments for specific types of victims.

In the United States, jurisdictions often apply differential punishments for similar crimes, depending on the victim and the offender's motive. For example, hate crime laws allow for statutory increases in punishment, depending on whether an offender targets his or her victims based on victim characteristics or have ideological motives and goals. The underlying rationale for these statutes is that they have the potential to deter this type of behavior through enhanced punishments. In terrorism research, understanding who the most likely victims and targets of violence are, based on those who have been targeted previously, allows for the implementation of practical policies that increase the costs to potential terrorists, while reducing any possible rewards.

From a macro-level perspective, victimologists have looked at characteristics of communities and places to determine whether they increase or decrease victimization rates. Building on rational choice theories and routine activity theory, crime pattern theory (Brantingham & Brantingham, 1993) argues that offenders identify places where they believe victims are most vulnerable and have the least amount of guardianship. The rational offender will identify these places through his or her daily routines and typically in locations with which he or she is familiar. The characteristics of these places increase the risk of offenders targeting them and the individuals who are located there (Eck & Weisburd, 1995). As offenders, their networks and their interactions with the environment are the most important components of crime pattern theory. The theory does not explain victimization directly. It does, however, help identify places, and therefore the individuals who frequent those places are at higher risk for victimization (Brantingham & Brantingham, 2008). This is an important point, as terrorists may target their victims for what they represent, and the location that a victim inhabits can affect an offender's perception of what he or she represents. For example, an anti-government extremist kills a person at a courthouse, but the victim neither worked at, nor had any affiliation with, the court. In this case, the extremist selected his or her victim as a proxy for the location, not caring whether the victim was a representative of the government, or not.

There are, however, critiques of these victimization theories. For example, Birkbeck and LaFree (1993) state that the victim-centric theories often are too simplistic in their modeling of situational characteristics; victim-level data often misinforms the role of the offender in the crime; and, many times, hypotheses of victimization risk are merely reformulations of offender decisions and behaviors. In addition to the major theories discussed previously, social scientists have identified other concepts that are useful in attempting to understand risk, such as victim-precipitation and the victim–offender overlap (Wolfgang, 1958); the cycle of violence (Widom, 1989); and repeat victimization (e.g., Feinberg, 1980; Lauritsen & Quinet, 1995). Although all of the aforementioned theories and constructs have been researched and, subsequently, developed into a strong subfield of criminology (Lauritsen, 2010), they have rarely been applied to terrorism contexts.

Victimization Theories and Terrorism

After the terrorist attacks of September 11, 2001, there was a substantial increase in the amount of empirical terrorism research being conducted. It is estimated that approximately 60% of terrorism-related articles that were published in criminological journals presented some form of statistics, whether descriptive or inferential (Silke, 2008). However, empirical, let along theory-driven, research on terrorism victimization comprises very little of that body of research. One of the first empirical examples of terrorism victimization is a case study of sectarian murders in Belfast, Northern Ireland, which presents data on the victims of these assassinations (Lebow, 1978). Arguing that this type of violence is not random, he references the impact of lifestyle on victimization risk, listing individual-level characteristics for the victims such as sex, age, residence, place of work, type of employment, ideological identity, and risky or foolish behaviors. Although not framed within the context of criminological theories, Lebow points toward a mix of victim lifestyle attributes and offender targeting behaviors that appeared to cause variation in victimization risk. He also presents evidence that at least, based on demographic characteristics, demonstrates a clear overlap between the age and lifestyles of the offenders and victims.

A study by Canetti-Nisim, Mesch, and Pedahzur (2006) collected victim-level data of all recorded acts of terrorism in Israel over a 10-year period to determine whether routine activity theory could explain victimization risk. When comparing between victims of suicide bombings and victims of other types of terrorism, the researchers found that specific characteristics placed individuals at higher risk for one type of victimization over the other. For example, students were more likely to be victims of suicide attacks when compared with non-students. The authors hypothesized that the student lifestyle differentially exposed them to this type of terrorism, as they more often utilized public transportation. The findings were similar for women. Their results were also consistent with the idea that victimization risk varies across attack type and *modus operandi*, based on a person's proximity to larger populations of motivated offenders. Although the researchers found support for victimization theories, their work was also important as it was one of the first individual-level analyses of victimization risk examining terrorist events within the context of criminological theory.

Also examining victimization risk in Israel, Feniger and Yuchtman-Yaar (2010) examined terrorism victimization risk. The majority of individuals were victimized while on public transportation, while almost a quarter was victimized while at a restaurant or an entertainment venue. The researchers gathered data on gender, age, ethno-religious group, immigration history, and socioeconomic status. Based on their analysis, they concluded that victimization risk is not a constant across the Israeli society, and that specific groups of individuals are at a higher risk of terrorism victimization. Supporting routine activity and lifestyle theories, individuals who were more often present in public spaces were more likely to be killed in acts of terrorism.

Two additional studies of ideological victimization used data from the United States Extremist Crime Database (ECDB) to examine homicide victims killed by Far Right extremists in the United States. Studying the differences within Far Right victims, Parkin, Freilich, and Chermak (2014) found variation in characteristics between victimization groups of the same extremist ideology. For example, anti-government victims were more often killed by a stranger or a firearm than anti-social-minority and anti-race victims. Anti-social-minority victims were least often killed by firearms, their assailants choosing instead to use knives, blunt objects, and bodily weapons (i.e., hands and feet). There was also variation

in victimization patterns at the individual level, as anti-government victims were more often white and older than the other victimization groups. This research demonstrated the importance of examining the variation of individual and situational characteristics of terrorist and extremist victims within a specific crime type and ideology.

A similar study compared victims of Far Right ideologically motivated violence (e.g., a white supremacist targeting and killing a bi-racial couple) to victims of non-ideologically motivated or "routine" violence (e.g., homicide victims of domestic violence or a robbery) within the theoretical framework of criminological victimization theories (Parkin & Freilich, 2015). The results of a multivariate analysis identified specific characteristics at the individual and situational levels that significantly increased or decreased risk of ideological victimization over "routine" victimization. For example, when testing the victim–offender overlap thesis, the research showed that being an ideological extremist increased a person's risk of "routine" homicide compared with an ideological homicide. Also, tied to the routine activities of a person's day, ideological victims were less likely to be killed while at work, but more likely to be killed outside, than "routine" victims. These results demonstrate how an individual's lifestyle can increase one type of victimization risk while decreasing another type.

Finally, it is also important to consider the targets selected by terrorists. Utilizing the target as a unit of analysis, researchers have found patterns in the spatial and temporal variation of terrorism (Johnson & Braithwaite, 2009; Behlendorf, LaFree, & Legault, 2012). The reason this is an area of study relevant to victimization research is that, depending on the routine activities of individuals, these patterns in targeting behaviors can increase and decrease the risk of ideological victimization for certain segments of the population based on their lifestyle.

Although all of the aforementioned studies have drawn from unique datasets developed to capture information about victims of ideologically motivated violence, many terrorism datasets do not capture similar information. The following section discusses several large data collection efforts related to terrorism and how research can utilize them for future research on victimization.

Data Sources for Terrorism Victimization

One explanation for why theories of victimization have rarely been tested on terrorism is the lack of available data. Typically, victimization data is collected through official data (e.g., the Federal Bureau of Investigation's Supplementary Homicide Report) and victimization surveys (e.g., the National Crime Victimization Survey). With terrorism, this is not the case. Self-report surveys would be too expensive and too expansive as, fortunately, terrorism is such a rare event. Sampling individuals around the world about their victimization experiences related to terrorism would result in too few individuals impacted (LaFree & Dugan, 2007). In addition, although not all acts of terrorism involve fatalities, the characteristics of fatal victimization events would be lost to a victimization survey, similar to the reasons for why the National Crime Victimization Survey does not ask about murder. On the positive side, however, although no dataset exclusively captures individual-level data about victims of terrorism and extremism, some datasets do capture characteristics of the victims and targets of terrorism.

Data on global or multinational terrorism incidents can be found in several large-scale data collection efforts, such as the International Terrorism: Attributes of Terrorist Events

database (ITERATE), the Rand Database of Worldwide Terrorism Incidents (RDWTI), the Global Terrorism Database (GTD), the World Incident Tracking System database (WITS), and Terrorism in Western Europe: Events Data (TWEED) (Sheehan 2012). Several of these databases collect incident-level victimization information. GTD collects data on target and victim information such as the number of people injured or killed (LaFree & Dugan, 2007; National Consortium for the Study of Terrorism and Responses to Terrorism, 2014). They also have information on the type of target, such as whether it was a business, government, police, military, journalists and media, or private citizen target. Within each of these categories, they also include subtypes. For the police type, the possible subtypes could be police buildings, police patrol, police checkpoint, police security forces or officers, and prisons or jails. In addition, the database lists the nationality of the target or victim where known from open-source data. Due to the structure of the database, GTD limits the collection of information to a maximum of three targets or victims. TWEED collects data on the numbers of individuals injured or killed, by both the terrorist organizations and the state. TWEED is also unique as it only collects data on domestic terrorism (Engene, 2006, 2007). While RDWTI only collects information on the target type (e.g., abortion-related, diplomatic, religious figures or institutions, etc.; RAND National Security Research Division 2015), ITERATE collects data on targets and victims (Mickolus, 2007). These variables include the number of victims, their nationalities, the type of victims, and whether the target was people or property. In addition, the number of injured and killed is also collected and broken down between US victims and other victims. The database also collects more victim characteristics in a separate file for those who were hostages.

There are also databases on terrorism and extremism that focus solely on the United States. The American Terrorism Study (ATS), which primarily tracks information of criminal cases prosecuted by the federal government as terrorism, collects data on levels of analysis connected to the court case, the incident, and the offender. Also coded is the name and location of the first three intended and/or actual targets (Smith & Damphousse, 2007). The ECDB collects data on crimes committed by ideological extremists in the United States. These violent and financial crimes can be ideologically and non-ideologically motivated. Importantly, from a victimization perspective, data is collected about the victims and targets of these crimes (Freilich, Chermak, Belli, Gruenewald, & Parkin, 2014). Victim-level characteristics include age, sex, race, country of citizenship, employment status, occupation, education, criminal history, and prior victimization experiences, among other variables. At the target level, additional information is also collected. For example, if a group of animal rights extremists bomb a store that sells animal fur, the database collects information on that company and its physical location, such as the address, type of business, and the amount of damage caused.

Even though these datasets are limited in the amount of data they collect on victims, they are potentially still extremely useful to victimologists. All of these datasets are built using open-source data, and criminologists interested in testing or developing theoretical propositions tied to terrorism victimization could treat the databases as a sampling frame and randomly sample incidents, or identify their sub-samples, and use this as a starting point to collect more information on the victims. For example, a researcher could identify and code incidents from the GTD with fatalities from the last 5 years for one country, then follow-up searches could be conducted to find and code additional victimization data that could be used to test criminological theories related to victimization. Admittedly, this would be a difficult task, but researchers could conduct pilot data collection efforts to determine

the feasibility of the methodology, as well as the validity and reliability of the data. Also, victimization theories that can be tested at the macro-level, such as routine activity theory or crime pattern theory, could use the incident locations identified in these databases to connect demographic or theoretical measures.

The Future of Victimization Theories and Terrorism

Although infrequently applied to terrorism, criminological theory provides useful frameworks to understand terrorism risk and events. It is important that criminologists extend their victimization research into the realm of terrorism and ideologically motivated violence. Simple questions—such as "Does our lifestyle or daily routine increase our risk of terrorism victimization?" or "Are individuals who associate with, or come from, populations similar to that of terrorist offenders more likely to become victims of terrorism?"—have rarely, if ever, been asked. The patterns that we have identified for crime victimization may, or may not, hold true with ideological violence. However, it is still important that we test these theories. If terrorism is truly only crime with a variation in motive, then criminological theories of victimization should be able to assist in predicting victimization risk. These results can then be used to identify individuals, places, and locations that are at higher risk for victimization, and policies can be enacted to reduce that risk. Also, as victimization research in criminology has shown that mechanisms for explaining victimization risk varies across crime type, it is also important to examine these theories in different times, places, and terrorist campaigns.

Victimologists should be creative in their application of theory. For example, at the individual level, perhaps the cycle of violence can explain the impact of victimization on future acts of terrorism. In terrorist campaigns, where civilians are victims of organizations and individuals who are motivated by ideology, there is also often state victimization. An important question for terrorism victimization research could be: "Are victims of both terrorism and/or state violence more likely to support and engage in future acts of ideological violence?" In Peru, for example, estimates show that between 61,000 and 77,000 people died during the government's war with the Sendero Luminoso and similar terrorist organizations. The country's Truth and Reconciliation Commission report, however, points out that, while approximately 55.5% of those deaths were connected to the terrorist organizations, the rest were connected to government actions (United States Institute of Peace, 2015). Criminological theorists should not ignore the reality of these campaigns and the fact that both terrorist and government violence may play a role in explaining victimization patterns and trends (for macro-level application, see, e.g., Jaeger & Paserman, 2008).

In addition, for criminology to better understand victimization patterns and test whether our theories can explain victimization risk, researchers must collect better data. As discussed, most large-scale terrorism databases have few, if any, variables measuring victim attributes. In the few studies that have attempted to explain victimization patterns related to ideologically motivated violence, all have used either no comparison group or a comparison group of other victims of extremists or terrorists. A study that compares victims of terrorism to non-victims would be ideal, allowing researchers to determine whether one's lifestyle or routine activities can actually explain variation in risk. However, comparing victims of crime with non-victims can be difficult, and no known database has collected data to complete this task.

Similarly, researchers can compare terrorist targets to non-targets. For example, a study of the targets of animal and environmental rights extremists in the United States could compare the characteristics of targets of arsons and bombings to similar targets that were not bombed. If extremists firebomb a business that sells fur clothing, what might we learn by comparing the characteristics of this business to a business in the next town, which also sold fur clothing, but extremists chose not to target? This type of case-control methodology could utilize the wealth of data found within geographic information system software and databases to identify appropriate comparison groups. Such an analysis would provide invaluable information not only for theory testing and development, but also for crime prevention (Freilich, Chermak, & Gruenewald, 2015).

Individual-level data on victim characteristics is also important. Depending on the ideology of the terrorist offender, demographic characteristics might increase the chance of victimization—whether for race, religion, or political beliefs. At the same time, a person's sex, age, employment status and type, income, and educational level can also impact their victimization risk, making detailed information on these attributes necessary for a true evaluation of risk. Finally, researchers should collect data on both fatal and non-fatal victims. Although some studies have focused on homicide victimization (Parkin & Freilich, 2015; Parkin et al., 2014), these data miss those who were targeted by terrorists but who survived because of post-event factors, such as less-than-lethal injuries or quicker access to better healthcare. In addition, information is also missing on those targeted but neither killed nor injured. Survey research that reaches out to these victimization populations could gain valuable insight into terrorist victimization experiences.

As discussed with criminological theories related to place, it is also important that victimization research include non-human targets. Locations, buildings, and modes of transportation, among others, are important pieces to the victimization puzzle. In criminological research, we know that a few locations account for the majority of criminal activity (Sherman, Gartin, & Buerger, 1989). However, we do not know if, and to what extent, this is true for terrorism. Location and place become important for victimization research because segments of society do not have an equal chance of being at a certain location at a certain time. If victimization risk varies for locations and times, then it will also vary for individuals who may or may not frequent those locations. If terrorists are more likely to target public transportation at certain times, then individuals who use public transportation at those times are at a higher risk. Their lifestyles and routine activities will disproportionately expose them to terrorist violence compared with those who do not utilize that public transportation. These patterns are important to uncover, especially when we are talking about levels of randomness in victim targeting. Terrorists target these victims, not for who they are specifically, but for their interactions with a place or location that represents something to the terrorists, such as a high-profile, symbolic, or easily accessible target. Multi-level modeling, which is important in understanding non-ideological crime victimization (Lauritsen, 2010), would also be important in terrorism to model the effects of place and location on individual risk.

If terrorists did not purposefully select victims or targets, at least to some degree, then all individuals and all locations within the reach of a terrorist organization would be at equal chance for victimization. In this scenario, a terrorist's campaign would truly be random, as no protective behaviors or daily routines would decrease risk. In many ways, terrorist organizations want the public to perceive their attacks as random acts of ideological violence, subsequently increasing levels of fear in the populace. However, it is only the perception of

random violence that terrorists seek, as the reality of the few empirical studies available shows that organizations and individuals motivated by ideology are highly selective when choosing the victims and locations of their acts. It is through the discovery of these patterns that criminological theory can help explain and predict victimization risk using theories that have already been developed and tested on non-ideological victims. Although other social science disciplines share some of these theories, and also have their own theories to explain victimization, it is criminology that is best suited to examine, explain, and hopefully deter terrorism victimization.

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Analyzing Radicalization and Terrorism: A Situational Action Theory

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Despite a noticeable uptake in data-driven research (LaFree & Ackerman, 2009), the study of the causes of terrorism and radicalization remains theoretically fragmented, leading at least one prominent scholar to express concern about the so-called stagnation of scientific research in this field (Sageman, 2014). In contrast to this pessimistic diagnosis, criminologists have argued that there is much to learn from research on crime and criminality, which could advance our understanding of the causes of non-state political violence, be it in terms of transferable research methodologies, analytical concepts, approaches to prevention, or theoretical frameworks (Deflem, 2004; Forst, Greene, & Lynch, 2011; Freilich, Chermak, & Gruenewald, 2015; LaFree & Freilich, 2012; LaFree, 2007; Rosenfeld, 2002).

Owing perhaps to the availability of large open datasets which aggregate event-level information, such as the Global Terrorism Database (LaFree & Dugan, 2007; LaFree, Dugan, & Miller, 2015), this criminological enterprise has added chiefly to our knowledge of the characteristics, distribution, and predictors of terrorist events, thanks to a number of studies guided by opportunity-focused approaches, such as rational choice, routine activities, crime pattern, and repeat victimization frameworks (Braithwaite & Johnson, 2011, 2015; Canetti-Nisim, Mesch, & Pedahzur, 2006; Clarke & Newman, 2006; Dugan, LaFree, & Piquero, 2005; Hamm, 2005; Parkin & Freilich, 2015), or by deterrence perspectives (Argomaniz & Vidal-Diez, 2015; Dugan & Chenoweth, 2012; Faria, 2006; Hafez & Hatfield, 2006; LaFree, Dugan, & Korte, 2009). By comparison, efforts to apply major criminological theories to our understanding of the development of terrorist criminality and individual involvement in terrorist action have been less conspicuous, with some notable exceptions (Agnew, 2010; Bouhana & Wikström, 2010, 2011; Fahey & LaFree, 2015; Pauwels & Schils, 2014).

Yet, as has been argued elsewhere, a scientific knowledge base that ambitions to inform prevention efforts needs general theoretical frameworks capable of explaining, organizing, and reconciling frequently disparate and patchy empirical findings (Wikström, 2011). To the extent that blocking opportunities for terrorist activity and deterring terrorists have not yet proven enough to control the threat of terrorism, and to the extent that governments

continue to promote prevention efforts aimed at suppressing the disposition to commit acts of terrorism in the population (see, e.g., the 2011 Revised Prevent Strategy in the United Kingdom),[2] robust theories are needed that can organize and articulate our knowledge base of how individuals come to perceive acts of terrorism as an alternative for action—a process commonly known today as *radicalization*.

In this chapter, we answer the call from Freilich and LaFree (2015) for criminologists to broaden their enquiry and address terrorism from the perspective of major criminological theories, by applying situational action theory (SAT; Wikström, 2006, 2010, 2014) to the explanation of terrorism and radicalization. SAT is a recently formulated theory of moral action and crime causation that builds upon insights from criminological theory and research in particular, and draws from the social and behavioral sciences more generally, to explain why people commit acts of crime.

First, we offer a few comments about the importance of mechanism-based and integrative explanations with regard to accounts of terrorism specifically and crime more generally. Second, we introduce SAT and discuss how it can be applied to the study of terrorism and radicalization. Last, we conclude by outlining the priorities of a SAT-driven research agenda, thereby addressing Sageman's concern regarding the absence of systematic research programs in terrorism research (Sageman, 2014).

Importance of Mechanism-based and Integrative Explanations

In a recent review of the academic literature on the so-called "home-grown" Islamic radicalization, Anja Dalgaard-Nielsen (2010) identifies three main categories of approaches, each concerned with a different level of analysis: (1) *French sociological accounts*, which focus on the role of the macro-cultural and socioeconomic context in the radicalization process, with particular attention to factors that could explain the appeal of radical Islam for seemingly well-integrated Muslims; (2) *social movement and network theories*, which privilege the individual's immediate psycho-social environment to explain how they become exposed to, and eventually adopt, radicalizing ideologies, to the point of involvement in terrorism; and (3) *largely atheoretical accounts*, which analyze the background characteristics of terrorists in search of empirically grounded typologies of actors and their motivations, and of distinct "pathways" into radicalization. Nielsen concludes that, while each category of accounts addresses salient elements of the radicalization process, all of them fall short of being a full theory that could tackle the "problem of specificity" (Sageman, 2004) and explain why the majority of individuals experiencing these particular conditions (e.g., an inimical socio-economic context; membership in a social network containing radicalized individuals; socio-political grievances) *do not* undergo the process of radicalization. Nielsen goes on to suggest that these accounts should be seen as complementary, rather than competing.

Similarly, Schmid (2014) contends that radicalization studies have privileged the *micro* level of analysis, but that full explanations should integrate the *meso* (community) and *macro* (structural) levels as well, although the strategy that should be adopted to effect this integration is not outlined. Taylor and Horgan (2006, p. 587) recommend that the study of terrorism should be brought "within a broader ecological framework," but their process model of terrorism involvement falls short of articulating those processes through which factors at different levels of analysis are theorized to interact. The choice to draw from the criminological notion of "individual pathway" leads to the inevitable conclusion

that routes into terrorism are irreducibly discrete, which would seem to impede the statement of a general developmental model. Meanwhile, the psychological perspective adopted by Taylor and Horgan, while legitimate in itself, means that an examination of the emergence of ecological conditions that support radicalization or terrorist involvement is largely out of bounds. Veldhuis and Staun (2009), for their part, have put forward a "root cause model" of radicalization in response to the weaknesses of "phase models," which offer, at best, chronological deep-descriptions of the radicalization process in a particular context (Moghaddam, 2005; Silber & Bhatt, 2007), while failing to provide a framework to differentiate between indicators (symptoms or markers) and genuine causal factors. Arguably, Veldhuis and Staun (2009) contribute a valuable synthesis of the factors associated with radicalization at several levels of analysis, but their "model" relies on enumeration more than integration. How one should determine the exact role and assess the relative importance of each category of factors is unspecified; the lack of an explicit theoretical framework manifests notably in the omission of an intermediate level linking macro and micro levels of explanation.

This challenge of integration should be familiar to criminologists. In an ambitious paper published in *Crime and Justice*, Weisburd and Piquero (2008) set out to test the respective "explanatory power" of theories of crime located at different levels of analysis. They concluded that all theories leave the bulk of the variance unexplained, and advised that each theoretical approach should look to "what is not explained" (p. 453), if scientific progress is to continue.

One might be tempted to address this difficulty by throwing any and all "risk factors"—individual, situational, social, ecological, macro-social—into the pot and hunting for statistical covariates of the outcome of interest (here: terrorism), but the limitations of this approach are recognized even by its proponents (Farrington, 2000), and have been discussed at length elsewhere (Wikström, 2011). In the search for risk factors, one quickly finds oneself overwhelmed by long lists of significant correlates, with no way to discriminate between symptoms, markers, cause, and accidents of statistics.

Alternatively, one might take the more difficult road—stop "segregat[ing] the 'ingredients'" of crime or terrorism, or, conversely, stop "including everything" willy-nilly, but instead seek to articulate the "rules of interaction" between levels of analysis (Sullivan, McGloin, & Kennedy, 2011); in other words, between the individual and his or her (developmental or behavioral) environment. In short, one might abandon a risk-factor-based approach in favor of mechanism-based accounts, whereby *mechanism* is defined, in the scientific realist tradition, as the causal process that links the cause to its effect (i.e., that explains *how* the cause brings about the effect).

Because mechanisms are inherently unobservable aside from their effects (think of gravity), they have to be conjectured from (hopefully valid) observations. In rare cases, the initial effort of conjecture occurs from scratch. More often, to kick-start this deeper theory-building, scholars' draw from cognate fields of study where understanding is more advanced, owing, often, to the greater availability of data. SAT (Wikström, 2011; Wikström & Treiber, 2015), which explains how acts of crime (including those defined as acts of terrorism) arise from the interaction between a person's propensity and his or her exposure to crime-promoting environments, is one such mechanistic theory. It provides a framework from which to derive analytically plausible causal mechanisms from observations, and within which, more broadly, to organize our knowledge of the factors involved in the explanation of acts of terrorism and the individual process of radicalization at different levels of analysis (Bouhana & Wikström, 2010, 2011).

SAT

SAT is a general, dynamic, and analytical theory of human action and crime causation (e.g., Wikström, 2006, 2010, 2014). It aims to explain all kinds of crime (hence, *general*), stressing the importance of the person–environment interaction (hence, *dynamic*) and mechanism-based explanation (hence, *analytical*). In a nutshell, the theory proposes that people ultimately commit acts of crime because they (1) perceive them as a morally acceptable action alternative, given the circumstances (and no relevant deterrent is strong enough), or (2) fail to adhere to personal morals (i.e., fail to exercise self-control) when they are externally incited to break them. To explain why people, for example, deliberately crash an airplane into a building, blow themselves up in a crowded underground train. or go on a shooting spree on a beach, we need to understand why they come to see such acts as an acceptable action alternative (or fail to resist external pressures to carry out such acts). A crucial question for the analysis of acts of terrorism then becomes:

> *why do some people come to see acts of terrorism as acceptable, or become externally pressurized to carry out acts of terrorism?*

Rule-guidance: Crime as Moral Actions

SAT rests on the basic assumptions that *humans are essentially rule-guided creatures*, and that *society (social order) is based on shared rules of conduct* (Wikström, 2010). People express their desires, and respond to frictions, within the context of rule-guided choice. The patterns of human behavior we observe are fundamentally an outcome of rule-guided routines. SAT defines and analyzes acts of crime as *moral actions*, that is, *actions that are guided by value-based rules of conduct specifying what is the right or wrong thing to do (or not do) in response to particular motivations in particular circumstances*. Acts of *crime* are specifically defined as "breaches of rules of conduct stated in law," and this is what all acts of crime, in all places, at all times, have in common, and what makes a general theory of crime causation possible. Acts of *terrorism* are breaches of rules of conduct stated in law, and may therefore be explained as such.

SAT asserts that the same process that explains why people follow or break rules of law should also explain why they follow or break other kinds of moral rules (e.g., informal rules of conduct). Understanding why people break rules of conduct stated in law is, hence, a special case of a more general understanding of why people follow and break rules of conduct.

Against the background that people's actions characteristically are rule-guided, that social order is based on shared rules of conduct, and that acts of crime are actions that break rules of conduct stated in law, SAT proposes that people's *crime propensities* (tendencies to see particular kinds of crimes as viable action alternatives) are largely dependent on personal morals (moral rules and their associated moral emotions[3]) and the ability to exercise self-control (i.e., the ability to act in accordance with one's own personal morals). SAT further suggests that the *criminogenic inducements* (encouragements, or lack of discouragements, of particular kinds of acts of crime) of places (environments) principally depend on the efficacy of the moral norms and their enforcement in those places, relevant to the motivations (temptations, provocations) that the actor experiences at any given time.

Situational Causes: Interactions and Action Mechanisms

A second set of basic assumptions that underpin SAT is that *people are the source of their actions* (people perceive, choose, and execute their actions), but that *the causes of the actions are situational*. People's motivations, their particular perception of action alternatives, process of choice, and execution of action in response to motivations are triggered and guided by the relevant input from the person–environment interaction. The "situation" cannot be reduced either to the person (propensities) or the place (environmental inducements), but is, instead, the outcome of the input from their particular combination, creating a specific motivation and perception of action alternatives. At times, propensity is the greater influence; at other times, it is exposure (environmental inducements)—but there is always a minimal interaction between the two.

The perception–choice process—triggered and guided by the *interaction* between the person and the setting (immediate environment)—is the *action mechanism* that explains what kind of action (if any) they will take in response to a particular temptation or provocation. The key elements of the action process are motivation, the moral filter, and controls. *Motivation* (temptations, provocations) initiates the action process by providing goal direction (a necessary, but not sufficient, factor); *the moral filter*, defined as "the moral rule-induced selective perception of action alternatives in relation to a particular motivation," provides action alternatives; and *controls* (self-control, deterrence) affect the process of choice when, *and only when*, people deliberate over conflicting action alternatives. When a person is externally pressured to do something against his or her personal morals, whether or not he or she will do it depends on his or her ability to exercise self-control. When a person considers and finds an act of crime acceptable in the circumstances, whether or not they will carry it out depends on the presence of relevant and efficient deterrents (see further, Wikström, 2014:78–83).

Most people who have been provoked or frustrated into action—for example, by the foreign policy decisions of their government (motivation)—will never come to perceive terrorism as an action alternative. Lacking the propensity for terrorism, they will not even consider it, but may instead entertain other alternatives, such as taking part in a public protest, writing to their elected representative, or simply complaining about it to a friend. Of those who *do* perceive terrorism as an alternative, not all will choose to carry out such an act in a given situation (hence, radicalization does not *entail* involvement in terrorism). The situational model of SAT also explains how individuals who *do not* perceive terrorism as a possible alternative (who have not been radicalized) may yet become (knowingly) involved in an act of terrorism under situational pressures that overcome their capacity for self-control (i.e., the capacity to act in accordance with their own personal morals).[4]

The "Causes of the Causes": Psychosocial and Socio-ecological Processes

SAT stresses the importance of clearly differentiating between "causes" and the "causes of the causes" when analyzing crime causation. The problem of why people vary in their crime propensities, why environments vary in their criminogeneity, and why people vary in their exposure to criminogenic settings are all questions best addressed as questions about the "causes of the causes." For example, the question about the role of "radicalization" in understanding "terrorism" is primarily a question about "causes of the causes" rather than causes. The question about how people come to develop propensities (personal morals) that make

certain acts of crime acceptable, such as the killing of cartoonists whose work is regarded as offensive, is a question about the "causes of the causes" of terrorism.

SAT insists that the *social and developmental causes* of crime (as causes of the causes) are best analyzed in terms of emergence-selection processes. What kinds of people and what kinds of environments (settings) are present in a jurisdiction is the result of historical processes of personal and social emergence, and sets the stage for which kinds of interactions can occur in the particular jurisdiction. Contemporaneous processes of social and self-selection create the interactions that cause the situations to which some people may respond by committing acts of crime.

As regards personal emergence, SAT suggest that *psychosocial processes* of moral education and cognitive nurturing (Wikström & Treiber, 2016) are the key to understanding why people develop different crime propensities (because crime propensities are based on specific law-relevant personal morals and abilities to exercise self-control) and may change in propensity over time (e.g., "radicalize"). *Moral education* may be defined as "the learning and evaluation process by which people come to adopt and change value-based rules of conduct about what is the right or wrong thing to do in particular circumstances." The process of moral education largely builds upon three sub-mechanisms: (1) instruction, (2) observation, and (3) trial and error (see further, Wikström & Treiber, 2016). The efficacy of moral education principally depends on its homogeneity (i.e., the degree of moral correspondence of the relevant instructions, observations, and trial-and-error incidents that the person experiences). People are not, however, passive recipients of new and changed moral experiences, but actively evaluate (and re-evaluate) them in light of their current set of personal morals and their cognitive capabilities. In this context, "radicalization" may be thought of as a process of moral education. *Cognitive nurturing* refers to the experiential processes that positively influence neurocognitive abilities (capacities and their expression). It can be argued that two main criteria determine a person's cognitive abilities at any given time: his or her basic neurological constitution, and the extent to which his or her specific capabilities have been exercised (see further, Wikström & Treiber, 2016). Moral education and cognitive nurturing are not unrelated, because cognitive deficiencies can affect a person's ability to adequately understand, internalize, and apply rules of conduct. Understanding psychosocial processes of person emergence are important because they help us understand how people become vulnerable to "radicalization" and become "radicalized."

As regards social emergence, SAT asserts that historic *socio-ecological processes* resulting in a particular spatial and temporal differentiation of kinds of people (with specific propensities) and kinds of activities (with specific inducements) in a jurisdiction are key to understanding why places (settings)[5] come to vary (and vary temporally) in their moral contexts—that is, in their moral norms and levels of enforcement (and, thus, why some places are more criminogenic than others). People act and develop in settings, and hence the exposure they have to particular moral contexts will play an important role, in the longer term, for their development of particular propensities and, in the immediate term, for their specific actions. Processes of social emergence are important for the understanding of how particular moral contexts appear, such as those promoting "radicalization."

Exposure to Criminogenic Influences: Social and Self-selection

SAT suggests that contemporaneous processes of social and self-selection explain why people (and groups of people) within a jurisdiction vary in their exposure to criminogenic settings (Wikström, 2014:84). *Social selection* refers to rules and resource-based social

forces that encourage or compel, or discourage or bar, particular kinds of people from taking part in particular kinds of time- and place-based activities. Processes of social selection link macro and micro conditions in the explanation of human action and crime. *Self-selection* refers to the preference-based choices people make to attend particular time- and place-based activities within the constraints of the forces of social selection. Processes of social and self-selection place different kinds of people in different kinds of settings, creating the particular kinds of interactions against the background of which they, in the longer term, will develop and change their propensities and, in the immediate term, will act. Processes of social and self-selection are crucial to our understanding of how people come into contact with particular moral contexts, such as, for example, moral contexts that, through their moral education, promote "radicalization."

Self-selection operates on the basis of an individual's *preferences* (likes and dislikes), acquired through life experience (Druckman & Lupia, 2000). Olsen (2009) recounts how a preference for political engagement led one young individual to take part in a demonstration, where he was given to observe a group of young rioters. The youth thought that this "was really exciting … this group, they were all my age, I could identify with them and they made something of themselves" (p. 14). He later approached them. This example illustrates how the non-radicalizing features of a setting can act as a personal draw, incidentally exposing people to terrorism-promoting influences. Self-selection being an ongoing process, preferences acquired during the earlier stages of radicalization can result in more intense and sustained exposure, such that some individuals may eventually graduate from sporting grounds in Birmingham and Internet cafes in London to training camps in Afghanistan.

Social selection sets the stage for *self-selection*, by broadly constraining the kinds of settings that people are likely to find themselves in.[6] Observations suggest that individuals who belong to certain groups—for example, young people, residents in Muslim communities, students, immigrants, people with a criminal history—are over-represented among home-grown terrorists at certain times (for a full review, see Bouhana & Wikström, 2011). They also suggest that radicalizing settings are not distributed evenly, but that they are found in some kinds of environments at certain times more than others (particular countries, communities, neighborhoods, institutions; e.g., Jordán & Trujillo, 2006; Genkin & Gutfraind, 2011, on radicalization "magnets"; Hamm, 2013, on US prisons that produce more environments supportive of radicalization, compared with others). In response to this, the UK 2011 Prevent strategy lists 25 "priority areas"—cities and boroughs of London—which, the document states, should be targeted for local delivery of the strategy.

Beyond area of residence, the logic of social selection also suggests that membership to certain social groups may affect the chance of exposure to radicalizing contexts, much as it affects the likelihood[7] of exposure to criminogenic settings in the context of other crime (e.g., Treno, Gruenewald, Remer, Johnson, & Lascala, 2008; Wikström, Oberwittler, Treiber, & Hardy, 2012). In many societies, individuals from an Islamic ethno-religious background are more likely, compared with individuals without such a background, to find themselves in places where Muslims routinely congregate (e.g., mosques, Islamic bookshops, youth clubs, halal butcheries; see House of Commons, 2006, for a discussion of the association between such sites and the radicalization of the 7/7 bombers). If radicalizing features are more prevalent in such places (at particular times, in particular locales), then the people exposed to radicalizing influence (at those times and in those locales) would be more likely to have a Muslim background. Occupation may also be a factor of social selection. For example: in a

given society where, due to the organization of social life (structures and routines), students had the opportunity to spend significantly more hours of the day surfing the Internet compared with most working adults, individuals exposed to virtual radicalizing settings would be more likely to be students. (This state of affairs would, of course, change as technology made it easier for different kinds of people to spend a lot of time online, likely leading to a diversification of "profiles" of online radicalization.) People with a criminal history are more likely than non-criminals to be exposed to a prison environment, while asylum seekers are (still on logical grounds) more likely to spend time in immigration centers than non-asylum seekers, and students are more likely to spend time on university campuses—all environments that, at one point or another, and with or without cause, have been dubbed "hotbeds" of radicalization (House of Commons, 2012).

In short, given the organization of social life and the location of radicalizing settings, some categories of people may be more likely to be exposed (at some times and in some locales) compared with the rest of the population, as a result of social selection. If that is the case, then social selection may be one of the key processes that would explain why members of particular terrorist cells, groups, or particular campaigns or waves may share some socio-demographic characteristics (they meet in places that draw people with these characteristics), yet the search for general terrorist "profiles" remains futile (radicalizing settings displace to new environments over time, if only as a result of counterterrorist activity); hence, the kinds of people socially selected for exposure change over time.

Coda: Outlining a Research Agenda and Its Implications for Prevention

SAT posits several mechanisms linking individual, social ecological, and systemic levels of analysis in order to explain how people come to acquire a propensity for terrorism. SAT explains radicalization as the outcome of the interaction between an individual susceptible to moral change and the radicalizing settings present in that individual's activity field. Susceptibility to moral change is the outcome of a psychosocial process of personal emergence, while radicalizing settings are the product of a process of social ecological emergence.

The features most relevant to the radicalizing character of a setting are *an ineffective level of formal and informal social control (monitoring of socializing activity)*; *the promotion of radicalizing (terrorism-supportive) moral teachings (directly or remotely accessible in the setting)*; and *the opportunity to form attachments to the sources (radicalizing agents) of these radicalizing teachings*. SAT proposes that to explain why radicalization occurs in particular places at particular times is to explain why radicalizing settings emerge where and when they do and are sustained, while to explain why some (susceptible) individuals rather than others radicalize (the problem of specificity) is to explain why some people rather than others are exposed to the radicalizing settings in their environment through processes of *self-selection* and *social selection*.

Those *systemic* (i.e., macro) processes that are, therefore, of interest in the explanation of radicalization are those implicated in (1) the psychosocial processes involved in the personal emergence of individuals susceptible to moral change; (2) the social ecological processes involved in the emergence of settings with radicalizing features; and (3) the operation of processes of self- and social selection (why certain kinds of people are exposed to certain settings).

Against this background, we propose that, to better understand acts of terrorism and radicalization, we need a mechanism-oriented research agenda that focuses around advancing knowledge regarding three main topics:

1. Explicating the psycho-social processes (processes of moral education and cognitive nurturing) relevant to why people become radicalized
2. Explicating the socio-ecological processes (processes of population and activity segregation and differentiation) relevant to the social emergence of moral contexts (place-based moral norms and their enforcement) promoting radicalization
3. Explicating the relevant processes of social and self-selection that introduce susceptible people to radicalizing moral contexts

Armed with such a model of how factors at different levels of analysis interact to produce radicalization, it becomes possible to hypothesize the role (or lack thereof) of, for example, a given systemic factor (e.g., residential segregation) by asking how they could be implicated in psychosocial processes of personal emergence, social ecological processes of setting emergence, and processes of selection. Being able to formulate a plausible causal account will be crucial for research. Data and designs required to investigate social ecological processes will be quite different from data and designs needed to study psychosocial development. Greater analytical depth may eventually reconcile contradictory claims as to the role of systemic factors, such as poverty or political structures, in the radicalization process: some factors may play different roles in the emergence of different processes, or impact some but not others.

Empirical findings do not speak for themselves. A knowledge base capable of supporting policy must contain more than a catalogue of significant factors and regularly observed outcomes: it must include theories that advance explanations of how the former produces the latter. This necessitates going beyond empirical generalization to conjecture inherently unobservable but plausible causal mechanisms. Knowledge is achieved when facts are explained, rather than described. The first step toward building a policy-relevant knowledge base is therefore to develop theoretical frameworks that explain how causal mechanisms operating at different levels of analysis interact to produce the outcome of interest (Wikström, 2011). As physicist and philosopher of science Mario Bunge (2004, p. 182) puts it, "[f]inding [causal] mechanisms satisfies not only the yearning for understanding, but also the need for control."

Notes

1   Acknowledgment: Bouhana acknowledges support from EC Grant Agreement n. 608354 (PRIME) FP7-SEC-2013-1. Her contribution to this chapter reflects her views only. The European Union is not liable for any use that may be made of the information contained therein.
2   Available from: https://www.gov.uk/government/publications/prevent-strategy-2011.
3   In SAT, moral emotions such as shame and guilt are regarded as measures of strength of particular moral rules.
4   Depending on the strength of one moral's commitments or of one's capacity for self-control, the situational pressures required to move such an individual to terrorist action may go from strong provocation (e.g., threat to the life of loved ones if one does not engage in terrorism) to mild temptation (e.g., incitement from friend or kin to go along in the terrorist enterprise).

5 The concepts of "place" and "setting" are closely related and overlapping. According to SAT, the difference is that "place" refers to a specific location in time and space and its immediate environment (objects, people, events), while "setting" refers to the part of the immediate environment that a person in a specific location experiences with his or her senses.

6 Given the organization of society, there are places where people cannot go (or are less likely to go) even if they want to, because they lack the means, or because formal or informal constraints stand in the way (e.g., families not being able to afford certain schools; underage children not being allowed on premises that serve alcohol; women not being allowed to attend certain religious ceremonies).

7 The effect of social selection is, of course, probabilistic, not deterministic.

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Part IV
Research Methods

12

Measuring Terrorism

Laura Dugan and Michael Distler

Introduction

Scholars have been studying terrorism for many decades; however, it is only recently that research efforts have been able to rely upon systematically collected, broad-based data on terrorist incidents from across the globe. Prior to the twenty-first century, research on terrorism had been described as "impressionistic, superficial [offering only] … far-reaching generalizations on the basis of episodal evidence" (Schmid & Jongman, 1988:177). In other words, most scholarship came from case studies and qualitative unsystematic accounts of terrorists' lives, which were selected primarily based on the interests of the authors—ignoring other events and organizations that were perceived as more mundane. Things improved only slightly at the beginning of the twenty-first century, according to Lum, Kennedy, and Sherley (2008), who scanned more than 20,000 articles on terrorism published between 1971 and 2004 and found that seven met their criteria of being moderately rigorous evaluation studies. By comparison, this number is much smaller than the 500 rigorous and scientifically sound criminal justice program impact evaluations identified by Sherman and colleagues (1998) 10 years earlier.

Yet, to understand the causes and impacts of terrorism, we need to be able to measure all events—not just the interesting ones. Without observing shifts in the temporal and spatial patterns of incidents or trends of activity based on attack types, perpetrators, and targets, it is difficult to accurately characterize terrorism and to assess the effectiveness of strategies to reduce terrorist harm (LaFree, Dugan, & Miller 2015). To be fair, until recently, comprehensive and systematically collected data on terrorist activity had been unavailable, because its complexity makes it difficult to rely on more traditional sources that provide data on other forms of illegal violence. Crime data are typically compiled from relevant participants, especially legal agents, perpetrators, and victims. As explained by LaFree and Dugan (2009:419), "data concerning terrorist events from these three sources are entirely lacking or face important additional limitations."

This chapter begins by discussing efforts to collect terrorism data from three traditional sources: police and other legal agents, perpetrator reports, and victimization surveys.

It then discusses the growing reliance on open-source media reports to create event databases. Because these efforts are increasingly important, we delineate the advantages and limitations of data produced from open sources and end by discussing ways to improve analyses by accounting for the error structures in these data.

Applying Crime Data Collection Strategies to Terrorism

Data on other forms of illegal violence typically come from three sources: legal enforcement agents, perpetrator reports, and victimization surveys. In the United States, crime statistics derived from legal agents include the Uniform Crime Reports (UCR) and the National Incident Based Reporting System (NIBRS). Local law enforcement agencies compile the data from their records and send them to the Federal Bureau of Investigation (FBI) for processing (Federal Bureau of Investigation, 2014). When it comes to collecting crime data from multiple countries, sources include the International Criminal Police Organization (Interpol), the United Nations, and the World Health Organization (WHO) Mortality Database (World Health Organization, 2015). However, the coverage is inconsistent across countries, making the results of any global analysis of crime subject to serious limitations.

Compiling terrorism data from official sources is even more difficult for several reasons. First, without a global enforcement agency, data collection remains within jurisdictional boundaries, making it difficult to ensure that measurement is consistent across nations. Second, even within a single country, legal definitions might confound terrorist activity with other criminal violence, such as homicide or use of a deadly weapon. LaFree and Dugan (2009) explain that, in the United States, acts of terror were more typically prosecuted for related events, and not explicitly for terrorism. In fact, when reviewing the 30 charges against Dzhokhar Tsarnaev, one of the Boston Marathon bombers, none specifically mentions terrorism. Instead, they include conspiracy to use a weapon of mass destruction resulting in death, use of a weapon of mass destruction, possession and use of a firearm during and in relation to a crime of violence resulting in death, among others (*United States v. Dzhokhar A. Tsarnaev*).

One effort to collect terrorism data from official sources in the United States is the American Terrorism Study (ATS; Smith & Damphousse, 2002; Damphousse & Smith, 2004). ATS includes information on indicted individuals and groups from over 9,000 federal criminal counts relevant to terrorism. Cases where FBI terrorism investigations led to an indictment were collated by that agency under the order of the US House of Representatives Judiciary Subcommittee on Crime, which sponsored the original project. The list was then given to the ATS researchers, allowing them to review the cases at either the federal district court where the case was tried or the regional records center where it was archived (Smith & Damphousse, 2002). These data have been used to study decisions by prosecutors during trial (Smith, Damphousse, Jackson, & Sellers, 2002); to test theoretical predictions about leaderless resistance (Damphousse & Smith, 2004); and, among other things, to study the pre-incident activities for groups that adhere to different ideologies (Smith & Damphousse, 2009). While the collection of ATS data advances terrorism research in important ways, it is limited to only federally indicted cases in the United States. To the best of our knowledge, similar data are not being collected in other countries, and, if they were, the inclusion criteria for cases would be subject to the legal definitions in each country, making cross-national comparisons challenging.

A second source of crime data is through collection directly from the perpetrators. These data typically include offenders and non-offenders, with varying ranges of generalizability. The most general studies include the National Longitudinal Survey of Youth (NLSY), which samples males and females born in specific years and follows them over time (Bureau of Labor Statistics, 2012). These data are collected by the US Bureau of Labor Statistics and include questions about employment, family life, time use, and illicit behaviors. Although the data are generally representative, they are not used to generate crime rates. Instead, they are used by criminologists to assess factors that influence decisions to commit crime. For example, Apel, Paternoster, Bushway, and Brame (2006) use the NLSY to assess the impact of formal and informal work on delinquency. Other longitudinal datasets that include questions about criminal behavior are location-specific and are used to study predictors of antisocial behaviors over the life course and across generations. These include the Pittsburgh Youth and Rochester Youth Development Studies (Loeber, Farrington, Stouthamer-Loeber, Moffitt, & Caspi, 1998; Thornberry, Lizotte, Krohn, Smith, & Porter 2003), the Dunedin Longitudinal Study (Moffitt, Caspi, Rutter, & Silva 2001), and the Montreal Longitudinal-Experimental Study (Tremblay et al., 1992), among others. A key feature of these datasets is that the respondents were asked to report on offending behavior within a recent discrete period of time, typically 6 months or a year; or at least since the last time they were interviewed. This allows scholars to impose time ordering in analysis for a closer approximation of causal relationships.

When we turn to terrorism research based on data generated from perpetrator reports, we find only a subset of studies drawn from one-time interviews with captured or currently disengaged terrorists (Horgan, 2012). This differs substantially from the practice of interviewing a representative sample of unconfined persons repeatedly to estimate predictors of offending behavior. However, drawing from a general population is impractical, given that participation in terrorism is relatively rare. Further, as most terrorists are interviewed at the end of their offending career, longitudinal analysis with this group makes little sense. Thus, terrorists' entire offending career becomes the key measure, rather than the most recent period of time, introducing distortions as the details of events are forgotten or distorted as time passes. For these reasons, such interviews are inadequate for gleaning general predictors of terrorism. Instead, scholars interview known terrorists to better understand the interpersonal reasons for their engagement in terrorism.

Bloom (2011) interviewed prisoners and ex-prisoners to better understand the motives of female terrorists. Post and colleagues (2003) interviewed 35 incarcerated Middle Eastern terrorists in a custodial setting to understand decision-making within a group context and their attitudes toward weapons of mass destruction. Horgan (2009) interviewed 29 former terrorists and 23 of their supporters, friends, and family members in cities such as Belfast, Beirut, Tripoli, and Jakarta to better understand the complex and nuanced ways in which people become engaged in, and later disengaged from, terrorism. While those selected terrorist perpetrators are unrepresentative of all terrorists, their reported experiences are crucial to developing informed theory (Horgan, 2014).

A third source of crime data is victimization surveys. In the United States, the National Crime [Victimization] Survey was instituted in 1972 by the Bureau of Justice Statistics (BJS) in order to produce national estimates of crime, including events that were unreported to the police. Each year, estimates from the data are calculated by the BJS and compared with the UCR estimates. The US Census Bureau collects the data through computer-assisted in-person and telephone interviews of a representative sample of households, asking detailed questions about the household, respondent, and many different aspects of the victimization

experience (United States Department of Justice, 2013). Because both victims and non-victims are interviewed, the data are used by scholars to identify factors that predict victimization (Dugan & Apel, 2005) and to better understand the consequences of different circumstances surrounding victimization (Brecklin & Ullman, 2001).

It would be difficult to justify any effort to collect data from those who were victimized by terrorism to better measure it. Terrorist attacks occur so rarely that any estimation based on the data is erroneous. Further, victims are unlikely to be able to provide adequate information about their perpetrators, since their participation is often more about being at the wrong place at the wrong time rather than the culmination of risky activities. In fact, those injured at the scene of an attack often know less than those watching news reports on television or reading updates on social media.

This leads to an obvious, yet important question. If the media is equipped to collect detailed information on terrorist attacks, why not turn to the media for that information? It turns out that, since the late 1960s, data collectors have used media reports to populate chronicles of international terrorist events such as the International Terrorism: Attributes of Terrorist Events (ITERATE) database and the RAND chronology. The next section discusses, in detail, the advantages and disadvantages of relying on open-source media and other publicly available reports to populate terrorist event databases.

Open-Source Data Collection

Terrorism event databases such as the Global Terrorism Database (GTD),[1] the RAND Database of Worldwide Terrorism Incidents (RDWTI),[2] the International Terrorism: Attributes of Terrorist Events (ITERATE),[3] and the Chicago Project on Security and Terrorism (CPOST)[4] suicide attack database rely almost exclusively on open-source media articles to identify and code terrorist attacks from across the globe. Given this heavy reliance on open-source information, it is important that users appreciate the advantages of relying on the media, but, more importantly, they should also understand its limitations and how they affect the conclusions drawn in analysis.

Advantages

Some of the weaknesses of relying on traditional sources of criminal accounts to populate terrorism databases are overcome when we turn to open-source media accounts. The main advantages in this form of data collection stem from the synergistic relationship between terrorist groups and media outlets. Each thrives because of the activities of the other. Furthermore, media has become ubiquitous and is far more comprehensive than any other method to measure terrorism. Finally, technological improvements have enabled data collectors to use computers to capture media events more efficiently and completely.

The Synergistic Relationship between Terrorists and the Media   Turning first to terrorists' dependency on the media, we point out that one of the greatest differences between terrorists and more "common" criminals is that criminals want to avoid attention, while terrorists want to attract it (LaFree & Dugan, 2004). While the specific motivations of terrorist groups are diverse—often along the lines of seeking political, social, economic, or religious change—a common thread is that they want to stimulate public interest.

Increased public attention builds constituency support, which can improve the longevity of the movement (McCauley, 2002, 2006; Moghadam, 2005). To maximize the support for their cause, terrorist organizations often attempt to carry out attacks that grab media headlines (Hoffman, 1998; Jenkins, 1974; LaFree & Dugan, 2004). Many groups even announce their involvement in attacks to ensure that media attention is drawn to their cause.[5] Some groups, such as the Taliban, al-Qaeda in the Arabian Peninsula (AQAP), and al-Shabaab, have even established their own media outlets to ensure that they get the type of attention that they want. All of these attempts to generate public attention provide opportunities for the collectors of event databases to rely on open-source media to identify specific attacks as well as the details of attacks, such as its perpetrators and their motives.

Synergistically, media outlets are only able to survive when the public pays attention to their stories. Because violence attracts public attention disproportionately to other newsworthy topics (Jerin & Fields, 1994; Miller, 1998; Rodgers & Thorson, 2001), the media is drawn to terrorist attacks, often looking for unique ways to report events that differentiate them from their competitors. This media bias toward violence benefits researchers interested in collecting terrorism data, as most violent attacks will likely be captured by at least one news outlet.

The Ubiquity and Comprehensiveness of the Media　Whether occurring in a large city or a rural village, most shocking events will likely draw the attention of some type of media. And, more recently, with the advent of the Internet, connections across communities have strengthened, improving the reach and scope of the news. Furthermore, reporters—especially those employed by large media outlets such as Reuters, the Associated Press (AP), and the British Broadcasting Corporation (BBC)—are stationed in many parts of the world, drawing a global audience to the most volatile areas, for example, war-ravaged countries such as Syria and Ukraine or insurgent-controlled areas such as Mosul in Iraq and Mukalla in Yemen.

Even those attacks that occur outside the purview of international media often draw the attention of local news organizations and, increasingly, even casual observers, who report unfolding events through social media, such as Twitter, Facebook, and Reddit. In fact, global media outlets increasingly rely on social media as important sources for events that would otherwise be outside their reach (Sisario, 2013; Willnat & Weaver, 2014). Ironically, the social media boom has increased consumer demand for real-time reporting, leading traditional media to hasten their news releases (Pew Research Center, 2011; Willnat & Weaver, 2014). The growing ubiquity of news on events as they unfold creates an opportunity for researchers to study these events close to real time.

Technological Advancements in Article Acquisition　Perhaps the greatest advantage of pursuing open-source data collection is that the constant improvements in technology allow news to be disseminated faster and to more people, consequently making it easier to capture stories on terrorist attacks. In the 1970s, employees of the Pinkerton Global Intelligence Service (PGIS), the original collectors of what became the GTD, read newspapers from across the globe and transcribed the content of stories reporting terrorist attacks onto standardized index cards (LaFree, Dugan, & Miller, 2015). Today, collection efforts are mechanized by accessing a "pipeline" of news and automating story selection through machine-learning technology. Through the introduction of news aggregators that compile information from reports across the globe, both the general public and researchers can consume massive amounts of information on global events. For example, the BBC has a separate wing called "BBC Monitoring" that pulls articles from local news sources in all

regions and reprints them under the BBC name, thus giving data collectors access to local sources such as *The Express Tribune* in Pakistan, *The Nation* in Thailand, or *Garowe Online* in Somalia. Other news aggregators include All Africa, Big News Network, and Yahoo! News, among others.

News aggregation databases make it easier for researchers to find everything they need in one place. Databases such as Factiva and LexisNexis allow users to search through thousands of news sources and hundreds of thousands of indexed articles to identify stories relevant to their research interests. Furthermore, tools such as Metabase, a firehose API offered by Moreover Technologies,[6] scrape websites searching for news stories, delivering several million articles a day to users in close to real-time. The comprehensiveness of these news aggregators allows data collectors to be more confident that they are accurately capturing incidents of terrorism—that is, that they are successfully sifting the needles (terrorist attacks) from the haystack (pipeline of all stories).

This leads to a second major technological advance: machine-learning models that use algorithms to assess the likelihood that an article is reporting an event of interest (Jensen, 2013). The results of these models can be used to evaluate millions of stories and select only those that match a set of criteria, quickly building databases without slowing down for human assessment. Scholars, such as political scientist Philip Schrodt and his colleagues, have developed programs such as Textual Analysis by Augmented Replacement Instructions (TABARI), which can assess and code 5,000 lead sentences of news stories in 1 second (Schrodt, 2011). Hybrid methods can also be used to add human assessment to the selection process. Dugan and Chenoweth (2012) used TABARI to select an initial set of stories that matched the criteria for their Government Actions in Terror Environments (GATE) dataset. They then filtered the coded stories based on the actor and target, and had teams of research assistants review and code the remaining cases.

Human coders can also be used to evaluate the selected articles and provide additional information to the algorithm to improve selection—this is the process currently used to collect the GTD data (Jensen, 2013). Beginning with the January 2012 collection of the GTD data, the staff at the National Consortium for the Study of Terrorism and Responses to Terrorism (START) collected the data at START headquarters, whereas the data had previously been collected by outside contractors (Jensen, 2013; National Consortium for the Study of Terrorism and Responses to Terrorism, 2014). The pipeline of stories for the GTD are stored daily through a subscription to Metabase, which gives the team a pool of around 1.5 million articles per day from roughly 55,000 unique sources (Jensen, 2013, 2015). Supplemental articles are downloaded using Boolean search terms in three news aggregation sources: Factiva, Lexis Nexis, and Open Source Center. After search terms are also run on the full complement of Metabase articles, the GTD is then left with roughly 2,500 articles per day to be processed (Jensen, 2015).

The GTD team then turns to its resident computer scientist and research software architect, who has designed tools and algorithms to reduce this further down to a more manageable number. First, natural language processing (NLP) techniques are used to score and identify duplicate articles (Jensen, 2013). When similarity scores for any two articles are above a certain threshold, one of the articles is removed, so that the team is left with only unique articles. Second, machine-learning tools, as described earlier, are used to score the relevancy of each article to a terrorism event (Jensen, 2013). The algorithm is designed using human coders who read through a set of articles and vote on whether they are relevant to terrorism. Using this as a starting point, the algorithm updates its selection criteria as coders continue to select and reject articles according to

their relevance to terrorism. This leaves the GTD staff to review about 500 articles per day. The GTD team uses a web-based data management system to identify stories of attacks and to code each incident— a process that is dramatically different from the one used in the early years of the GTD when researchers scanned newspaper articles and recorded their assessments on index cards.

Limitations

Although open-source news reports appear to be the most practical data collection method for terrorism research, they come with limitations. Inherent to these limitations is the discord between the purpose of media and the purpose of researchers. Media exists to report the news, not to create event databases. In accordance with that purpose, news outlets are drawn to events that will grab headlines, creating a potential selection bias in open-source event chronologies. Further, because reporters record information close to real time, that information is limited to what is available at the time of the event, with additional details relegated to later reports that might not be captured in a chronology. Other concerns relate to the large number of news outlets, the thousands of different languages spoken around the world, and inconsistent data collection over time. A final limitation deals with the inconsistencies in how news is reported across the globe. These issues are described in more detail in the following text, followed by suggested ways to mitigate the problems.

Bias toward Newsworthy Events   The disconnect between the reasons why media collects terrorism stories and the needs of data collectors is one of the chief concerns when relying on open news sources to populate terrorism databases. The job of the media is to report the most information on a noteworthy incident as quickly and accurately as possible, which often means ignoring less notable events. An explosive device that is discovered and defused on a highway is unlikely to grab the attention of either the public or the media. This bias toward high-profile events can lead open-source databases to systematically miss smaller and/or unsuccessful attacks (Chermak, Freilich, Parkin, & Lynch, 2012).

Ways to Address Bias toward Newsworthy Events

There are a few different strategies that can be used during the data collection stage to reduce this bias. First, open-source data collection projects can focus explicitly on smaller-scale or unsuccessful attacks, so the data can later be integrated with other datasets. Dahl, Wilson, and Crenshaw (2014) are currently collecting data on failed and foiled terrorist incidents in the United States spanning the years 1993–2013.[7] Data on failed and foiled plots can also be included as part of a larger event-level database collection effort (Freilich, Chermak, Belli, Gruenewald, & Parkin 2014). Efforts can also be made to collect more data from local sources, which are much more likely to report on attacks that would affect only their communities. The technological improvements discussed earlier allow researchers to have easier access to these local sources, leading to an increase in sources over time. Figure 12.1 shows that the number of unique sources in the GTD has increased substantially from 1970 to 2014, with the biggest increases occurring after 1997, when collectors relied more heavily on the Internet. However, the biggest increase has been over the last 5 years as the collectors improved their access to local sources.
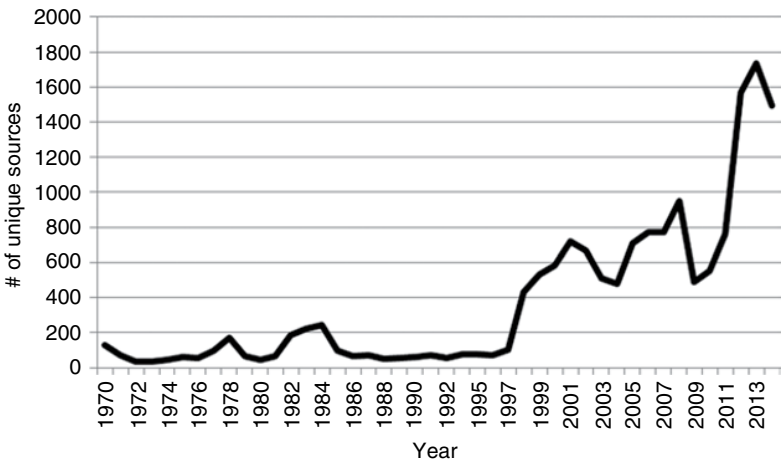
Figure 12.1   Number of Unique Sources Attached to GTD Incidents, 1970–2014

Although the availability of sources has increased over time, the important question is whether these local sources actually report on attacks that are missed by larger media outlets. Distler, one of the authors of this chapter, has been coding for the GTD over the last 3 years, and notes that many of the locally sourced articles, such as *Awam*, *Azadi*, or *Zamana*, which are local media outlets in the Balochistan province of Pakistan, do indeed cover the minor attacks that are ignored by the bigger news agencies, including unsuccessful attacks with minimal casualties or damage. While the potential of missing cases is certainly an issue that must be given proper attention by researchers, current data collection efforts by the GTD team are minimizing the effect that this problem might have on research that relies on the most recent data.

Inconsistencies across Sources   With multiple sources reporting on the same unfolding event, uncertainty regarding what happened will inevitably lead to information that differs across perspectives and over time, producing inconsistencies across sources. For example, suicide attacks often result in dozens and sometimes hundreds of potential articles that may report different numbers of deaths. Reporters who interviewed hospital officials may record a different number from those who interviewed the police, government officials, witnesses, or members of the terrorist organization. Moreover, as officials are able to clear the scene, and victims are treated in hospitals, valid information on the number of deaths may become increasingly available, making later reports more accurate than earlier ones.

Further, for reasons discussed in the preceding text, some incidents receive less media attention than others, resulting in missing information for many of the less notable attacks. For example, we might only know that a roadside bomb detonated in southern Lebanon, killing one person. In this example, researchers are unable to determine the exact location of the attack or who carried it out. To show the magnitude of this problem, the top of Table 12.1 presents the percentage of attacks missing data on each of the six primary variables collected in the GTD. The bottom of the table shows the percentage of cases that include all six variables and those that have valid data for all but the perpetrator name. This last number shows that missing values affect less than 20% of the cases when we are willing to forgo knowing the group responsible for the attack. However, if that information is also important to the analysis, then only 42% of the nearly 140,000 cases have information coded for all six of these basic variables. The inconsistencies in data availability across

Table 12.1 Percentage of GTD Base Variables with Unknown Information

Variable	Percentage Unknown
Perpetrator Group Name	46.27%
Target/Victim Type	2.02%
Attack Type	3.32%
Weapon Type	7.78%
Total Number of Fatalities	5.76%
Total Number of Injured	8.99%
	Percentage of Cases
All six variables	42.31%
All but Perpetrator Group Name	82.41%

attacks might discourage users; however, the variability in whether a group is attributed responsibility for an attack might be driven by systematic differences in the attacks that could help inform research questions. More importantly, researchers should recognize this limitation so they can adjust their research expectations to fit what the data permits.

Ways to Mitigate Inconsistencies across Sources

The philosophy behind the protocol used by the GTD team to address inconsistencies in reporting is that it is better to be consistent than to continuously guess which information is most accurate for each circumstance. By consistently following coding rules to reconcile contradictory information across sources, estimates on average will be more accurate and sometimes more conservative. For example, when multiple sources report different numbers of casualties, the team places greater weight on casualty counts that are reported as updates, by more valid sources, and are the same across multiple sources. If none of these rules are satisfied, then the lowest reasonable number is used as an effort to be conservative. Sources will also report conflicting information on the type of attack—whether it was a suicide bomber or a planted car bomb—and also on the intended target, among other things. The GTD team has produced sets of coding rules for each variable that are systematically applied to produce the most consistent and accurate data possible.

Over-reporting of Events Another problem resulting from drawing upon a large number of sources is that high-profile events tend to be reported by a plethora of sources, potentially resulting in duplicate attacks when reports on the same attack differ in details. This can be especially challenging when multiple attacks occur on the same day near the same location, and the media uses different spellings to describe these locations. Protocols must be established to carefully discern unique attacks and avoid duplicating events in order to minimize the problem of over-reporting.

Ways to Mitigate Over-reporting

The GTD team considers attacks to be duplicates of the same event if the location, target, and date of the incident exactly match. However, the team also acknowledges that some details in an attack could be misreported by another source, making them appear like two

different attacks. The GTD team searches for possible duplicates at three points during the data collection. First, newly identified incidents are compared with all other attacks reported in the same country within a couple of days before and after the new incident. Second, once all of the articles have been read and the incidents have been created for a single month, two team members review all events for each country to check for potential duplicate attacks. Third, after the cases have been fully coded, a separate team member is tasked with crafting an incident summary for each event, while keeping an eye out for potential duplicates. Despite these efforts, it is certainly possible that some duplicates are still reported as separate attacks.

Language Limitations   Open-source data collection is also limited by the language capabilities of the data collection team. At one end of the spectrum, collectors could invest substantial resources to hire language experts, which was the strategy adopted by the Worldwide Incidents Tracking System (WITS).[8] At the other end of the spectrum, collectors could compile data from only English-language sources and risk losing information on attacks in non-English-speaking countries. Many research projects lack the funding to hire specialized language speakers for even the top languages spoken, let alone for the more than 6,500 other languages, pressuring organizations to collect from exclusively English-language sources.

Ways to Address Language Limitations

The GTD team approaches this problem differently by using different tools to supplement the English-language sources. First, Open Source Center (OSC),[9] which is run by the Director of National Intelligence, is used to supplement the articles, as it includes articles translated from Arabic, Russian, Somali, and a variety of other languages from local media sources around the world. Second, tools such as Google Translate are used to translate specific articles that are known to report an attack. This endeavor is usually pursued at the end of the collection year to supplement information for countries that lack robust English-language sources, such as in Bolivia and Paraguay. As translation technology continues to improve, researchers will be able to translate a variety of non-English articles to help them identify more attacks. However, until the technology has improved to the point where it can detect distinct changes in dialect or basic translation of lesser-used languages, researchers will have to live with the fact that the data collection is unlikely to capture all attacks around the world.

Inconsistency over Time   With technology advancing to improve data collection, whether it was through the popularity of the Internet in the 1990s or source aggregation tools in the new millennium, it becomes difficult to discern whether increases in terrorism are due to actual increases in attacks or improvements in detecting terrorist events. Further, any long-term data collection effort is subject to changes in the team of researchers, which can influence collection practices and detection efforts. For example, the GTD has been compiled by four different data collection teams. Phase one was collected and coded in real-time by Pinkerton Global Intelligence Service (PGIS) from 1970 to 1997 (LaFree, Dugan, & Miller 2015). The second and third phases were collected by the Center for Terrorism and Intelligence Studies (CETIS) and the Institute for the Study of Violent Groups (ISVG), respectively. These data were collected retrospectively by CETIS covering January 1998 through March 2008, and by ISVG from April 2008 through October 2011 (National Consortium for the Study of Terrorism and Responses to Terrorism, 2014).

Starting in 2012, the data collection was brought in-house to START and is currently collected with close-to-real-time turn around.[10]

Although the same definition of terrorism has been used to identify cases for the entirety of the GTD collection, important differences should be noted and addressed by users of the data. First, the early and more recent collection efforts (phase one and phase four) were conducted in near real time, while the other two phases (phase two and phase three) were collected either retrospectively or with a lag that was greater than a few months. Retrospective collection inevitably misses attacks, as sources—especially local newspaper stories—become unavailable. A second distinction across the different GTD collections is that, beginning with phase two, many variables were added to the database. As a result, some variables are only available beginning in 1998, while there are other variables that have only been collected since 2012.[11]

Another important difference is the sheer amount of information currently available to the GTD team. With the new machine-learning processes and the ability to download information from around 55,000 unique sources per day (Jensen, 2013), it could be that attacks that might have gone unnoticed by earlier collectors (PGIS, CETIS, and ISVG) are more likely to be included in the GTD. The large increase from 2011 to 2012 is at least partially explained by the shift of the data collection from ISVG to START (Distler et al., 2013). However, Distler and colleagues (2013) also show that some of this increase in terrorism is likely the result of actual increases in attacks in specific countries.[12] More importantly, data collectors should be transparent about the changes in data collection methodology, as the GTD has been (Distler et al., 2014).[13] Further, users of the data should state the data limitations and address the changes in collection methods in the analysis. We offer some suggestions on how to do that in the following text.

Inconsistent Global Coverage   Coverage of terrorist attacks varies across countries, partially due to limitations imposed by some governments on the press. Freedom of the press data released by Freedom House reveals that a large portion of countries around the globe restrict press coverage of news stories, making it difficult to report on events regardless of media interest.[14] Unsurprisingly, countries with some of the lowest scores on press freedom, such as North Korea and China, record relatively few terrorist attacks over the 44 years of the GTD (7 and 188 attacks, respectively). Another source of inconsistency comes from the variations in local media. Some countries, such as the United States and Pakistan, have nearly unlimited coverage by local sources that can report on events as they unfold. Other countries, such as Syria and Iran, rely more heavily on state media. Finally, some media sources are beholden to report stories in a way that favors their source, which can be especially problematic if the source is engaged in the conflict. Thus, the Syrian Arab News Agency (SANA)—the state media source in Syria—reports news that generally favors the Bashar al-Assad regime. Similarly, articles published by the Voice of Jihad (VOJ) or Somali Memo are inherently biased toward the terrorist groups that operate them (the Taliban and al-Shabaab, respectively).

Ways to Address Inconsistent Global Coverage

Without sufficient funds to send teams into the field to directly collect data on terrorism events, collectors of open-source event databases must find other ways to ameliorate selection bias. The inconsistency of global coverage on terrorist attacks is a difficult problem that data collectors and researchers have yet to resolve.

The GTD team addresses source bias both in terms of evaluating media sources and evaluating events drawn from those sources.[15] The GTD does a general assessment of the validity of all sources from which the information is being pulled. Staff spends much time validating newly identified sources and continuing to monitor regular sources for newly developed biases. In addition, the GTD team has developed coding rules to avoid overstating the consequences of an attack as reported by interested parties. For example, terrorist groups tend to overstate the number of casualties, making their estimates suspicious if the only report comes directly from the group claiming responsibility for the attack. Therefore, casualty estimates furnished only by the perpetrators are discounted when identifying casualty figures. Unreliable sources might also misidentify the target. For example, because the Taliban adamantly claims that they only attack security forces and avoid killing or injuring civilians, the GTD team ignores statements by the Taliban when specifying the attack target. However, despite these procedures, the potential for source bias is still an important consideration that should be emphasized to both policymakers and researchers.

Now that we have a basic outline of the strengths and weaknesses of open-source data collection through media and news outlets and efforts at the data collection stage to address some of these weaknesses, we can next consider analytical ways to address these weaknesses.

Implications of Limitation for Analysis

When using open-source event data for analysis, the limitations described in the preceding text may produce biases in the estimates if they are ignored. Some can be addressed through model specification, but others can only be acknowledged and the implications for the validity of the results delineated. For example, terrorist attacks in the GTD are better measured in some countries than others for reasons explained in the preceding text. Thus, when scholars model country–year variation of terrorism, measurement error in the dependent variable will result in inefficient estimates, leading to possible Type II error—or nullified findings when its effect is real (Greene, 2008). By acknowledging this weakness, the analyst can alert readers that statistically marginal findings could nevertheless be significant.

We summarize two related problems for analysis: (1) problems that result from the limitations in open-source data as measurement error for those analyses that aggregate the number of attacks to a geographical and/or temporal unit; and (2) problems of interpreting missing data for those analyses that filter cases according to a specific incident characteristic or use the data with missing values in an event-level analysis.

Measurement Error   Despite efforts to be comprehensive, terrorist attacks will inevitably be undercounted, leading to systematic measurement error, regardless of the level of aggregation. When the number of terrorist attacks is used as the dependent variable, then scholars must consider that their estimates are inefficient. Further, because we know that the error comes from undercounting attacks for a number of reasons, the measurement error is not purely random, possibly resulting in biased findings due to selection. As noted in the preceding text, attacks are more likely to be reported if many people died, they were perpetrated in countries with an open press, or they were witnessed by persons with better access to social media (e.g., a Twitter app on their smartphone). With this type of knowledge, scholars can sometimes add control variables that are directly related to these factors to better calibrate their estimates. By absorbing the variation of terrorism that is due to

detection, the estimates for key variables will be able to better draw on the variation of actual attacks. For example, in a country–year analysis, scholars can include as a control a measure of press freedom (see Young & Dugan, 2011). Further, when using the GTD, data collection periods could be used as controls to adjust for differences in average number of attacks detected by each data collection team. Finally, scholars might consider reducing their sample to only measure attacks in a subset of countries with greater press freedom. Young and Dugan (2011) re-estimated their models using data from only democratic countries with high levels of press freedom to check the robustness of their findings.

If terrorist attacks are used as an independent variable in a model predicting another outcome, researchers could use instrumental variable analysis to better isolate the true variation in the number of terrorist attacks to produce a consistent estimate of the effect (Greene, 2008). Factors that are associated with the actual number of attacks, but are unrelated to the mis-measurement of terrorism, could be used as instruments. However, finding a suitable instrument for terrorism is likely to be challenging because many candidates (such as levels of democracy or religiosity) are likely also related to press freedoms.

Finally, when measurement error changes over time as data collection evolves, control and instrumental variables should also vary over time to improve estimation. For example, one strategy is to use the number of unique sources drawn upon as a control variable when modeling the number of attacks in a given country during a given year. As Figure 12.1 shows, GTD attacks in countries in the 1970s and 1980s are drawn from fewer sources than attacks in recent years when news aggregators have populated the pipeline of stories to be evaluated. Further, the number of different sources for each country will also vary across levels of press freedom, as those countries that only allow state-run agencies to report news will have fewer sources than in more open societies.

Missing Data   Missing data from terrorist attacks can also be problematic when scholars filter the events on variables that are only partially available in the data or if they conduct an event-level analysis that includes incident-specific variables. For example, if scholars only want to analyze attacks perpetrated by a specific organization, they will miss unattributed attacks that were also perpetrated by that group. By ignoring unattributed attacks, the findings are vulnerable to selection bias. However, this selection bias is easier to address than that due to undetected terrorist attacks, because scholars have access to the unattributed attacks. Strategies could be developed to probabilistically assign the likelihood of an unattributed attack to specific organizations, allowing for a series of sensitivity tests to assess the robustness of the findings under different attribution rules. For example, in their analysis of the effects of veto players on domestic attacks, Young and Dugan (2011) discerned attacks by "homegrown" and "foreign" terrorists. They designated as "ambiguous" all attacks with unattributed perpetrators or with perpetrators of unknown origin and ran four models with the dependent variable filtered on attacks by known homegrown, known homegrown plus ambiguous, known foreign, and all perpetrators. The results provided important insight into the relationship between government processes and terrorism.

For event-level analysis, ignoring missing data will also lead to selection bias if the researcher allows incomplete cases to be dropped from the analysis. A better strategy is to impute missing data using one of a number of different multiple imputation strategies (van Buuren, 2012). The benefit of event data such as the GTD is that many different variables are available that can be drawn upon to improve imputation. For example, if the number of fatalities is missing, knowing the type of attack, weapon, and location can improve imputation of that value for analysis. Gruenewald and Pridemore (2012) use multiple imputation

by chained equation to complete values on missing cases in a comparison of Far Right terrorist homicides in the United States using the Extremist Crime Database (ECDB) and common homicides drawn from the UCR's Supplementary Homicide Reports.

   The measurement error and missing data problems and the suggested strategies to address them are only a subset of issues that researchers must face when analyzing open-source data. In general, we hope that this chapter will help readers to think more critically about the limitations of the data that they use and to conduct as many sensitivity checks as possible so that they can more confidently present their findings.

Conclusion

This chapter attempted to raise important issues faced by scholars who study terrorism by first turning to common ways that other illegal behavior is measured. We conclude that relying on traditional criminological methods for gathering data on terrorism can provide some insight into the processing of cases for specific countries, and the motivations for a subset of terrorists, but it falls short of providing an objective portrayal of worldwide terrorism. We conclude that, at present, the best way to measure terrorism is by relying on open-source media and other publicly available reports. Yet, users of open-source terrorist event databases should not assume that they capture every terrorist attack perpetrated across the globe. Instead, they should ask, with great skepticism, how the data were collected and how that collection process has changed over time. The answers to these questions can then be used to improve analyses, so that conclusions are drawn from estimates suffering less from biases due to data collection. Open-source data collection continues to improve as technology advances and as media become more ubiquitous. Temporal changes in media and collection sophistication should not be confounded with temporal changes in terrorist attacks. Users of data should be as well informed of the collection methods and biases as are the collectors.

Notes

1   Available for analysis and download at http://www.start.umd.edu/gtd.
2   Available for download at http://www.rand.org/nsrd/projects/terrorism-incidents/download.html.
3   Available for download at http://www.icpsr.umich.edu/icpsrweb/DSDR/studies/07947.
4   Searchable at http://cpostdata.uchicago.edu/search_new.php.
5   It should be noted, however, that there will be instances where groups will seek to conceal their involvement in an attack by either failing to claim responsibility (Hoffman, 1997) or by claiming under a different name (Smith & Damphousse, 2009).
6   For more information, please visit: http://www.moreover.com/get-metabase-info.
7   For more information on this project, see: http://www.start.umd.edu/pubs/START_Dahl_ComparingFailedFoiledCompletedSuccessfulTerroristAttacks.pdf.
8   WITS was a publicly available database on incidents of terrorism, created and maintained by the National Counterterrorism Center (NCTC).
9   OSC provides open-source intelligence, including textual translation, to government employees and sponsored government entities.
10 There is currently a lag of approximately 3 months between when attacks happen and when they are identified and coded by the GTD team. However, the data are still released to the public on a yearly basis.

11 The GTD team attempted to code the earlier data retroactively; however, only some variables could be applied to the GTD I cases. Geocoding of legacy cases, which is still ongoing, is one example of information that was not coded originally but has been added to the database as a whole. However, the GTD only reports whether a group claimed responsibility for the attack beginning in 1998 because it was impossible to ascertain that information from the original index cards collected by PGIS.

12 Such as the rise of Boko Haram in Nigeria and al-Shabaab in Somalia.

13 The GTD describes in great detail the different phases of data collection in the Codebook; on the GTD website; and through research papers, discussion points, and presentations.

14 The 1980–2015 data are currently available for download here: https://freedomhouse.org/report-types/freedom-press#.VUU-LflVhBc.

15 Other scholars have attempted to address source bias through a rank ordering of the different types of open sources, finding that court documents tended to be the most reliable (Sageman 2004:65).

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Paradigmatic Case Studies and Prison Ethnography: Future Directions in Terrorism Research

Mark S. Hamm and Ramón Spaaij

Terrorism research is currently divided into two warring camps fueled by a sort of methodological narcissism. On one side stand quantitative researchers, who scour previous reports looking for commonalities of terrorism, which are then coded and spun into trend lines, bar graphs, and statistical formulae. On the other side of the divide stand the qualitative researchers looking for a story, or a narrative about why people become terrorists and what sets them apart from those who do not become terrorists. And never the twain shall meet. Quantitative researchers accuse qualitative researchers of being unduly influenced by their own worldview. Objectivity can never be achieved when solipsism rules the day. Qualitative workers fire back with a more damning charge: in pursuit of elegant statistical explanations of terrorism, quantitative researchers first turn people into categories and then simply study the categories, thereby sacrificing their humanity.

It is actually a very silly argument. Quantitative research on terrorism is typically created through the study of databases. Using standard definitions of terrorism, these databases are generally derived from open sources such as prior research, terrorist memoirs, government reports, court records, and media sources. In constructing a database, researchers usually get "down in the weeds" of the open-source material to develop the "who, what, when, how and why" of a terrorist incident. In other words, quantitative researchers develop a narrative about terrorism. Although they do write stories about terrorism, in constructing their databases quantitative researchers must necessarily *think* in terms of narrative, because there is no other way to make sense of "who, what, when, how and why." All terrorism research is a search for consistencies in the narratives. Once aggregated, consistencies are used to deduce or test various theories of terrorism. The conventional wisdom that quantitative and qualitative research on terrorism has nothing in common is therefore misguided.

This chapter critically reviews two major qualitative approaches to terrorism research: case studies and ethnography. As will be shown, both approaches have contributed to the cumulative development of knowledge in terrorism research, and they hold up well when compared with other research methods. Yet, we also seek to dispel the prevailing myths surrounding the use of case studies and ethnography in terrorism research in order to highlight promising methodological avenues for future research.

The Case Study in Terrorism Research

The most commonly used method in qualitative research on terrorism is the case study, which involves the intensive examination of an individual unit of a class of phenomena. The individual unit, or "central subject" (Abbott, 1992), in a case study can be social actors or groups but also events, connections, or states of affairs (Swanborn, 2010). Examples of case studies in terrorism research include Sageman's (2008) study of Ahmed Omar Saeed Sheikh, the man who kidnapped *Wall Street Journal* reporter Daniel Pearl, who was later beheaded by al-Qaeda; Stern's (2003) study of biological weaponry used by the militant group The Covenant, The Sword, and the Arm of the Lord; and Simon's (2000) analysis of chemical terrorism in the case of Muharem Kurbegovic (the "Alphabet Bomber"). Again, in these studies, researchers began with open sources to develop a narrative of the "who, what, when, how, and why" of a terrorist incident. To this, some researchers add fieldwork involving interviews and mail correspondence with terrorists and significant others, including counterterrorism officials, spouses, ex-lovers, siblings, employers, friends, and lawyers.

The case study method is particularly suited to terrorism research because it not only has the capacity to analyze in depth a small number of cases, but also the ability to discover the sequence of individual trajectories leading to terrorism. Becker (1992:208) argues that case studies focus on process, or "the temporal dimension in which phenomenon occurs in specific settings." According to Becker, social processes form a narrative analysis that has a story to tell. These stories form the basis for inductive theory building. Burawoy (1998) and Flyvbjerg (2006) make the point that even one deviant case increases the empirical content of theory construction.

All of this raises two compelling questions for case study research on terrorism. Are all cases worthy of study? If not, how does the researcher select a case over others? In the following text, we argue that these questions of qualitative research are best answered through basic quantitative research. Here, the twain shall meet.

The Paradigmatic Case Study

One analyst has argued that the capacity of a case study to contribute to theory development "depends on the case one is speaking of and how it is chosen" (Flyvbjerg, 2006:225). There are various strategies for case selection that are not necessarily mutually exclusive. The selection of paradigmatic cases is still an under-used strategy that holds particular promise for terrorism research. A paradigm is a typical example of something, or a model. Paradigmatic cases are carefully selected examples extracted from a larger phenomenon (Pavlich, 2010). As applied to terrorism research, the process of isolating pivotal cases from a database is a deliberate research tactic that can reveal key elements of the terrorism phenomenon. Think about the problem of lone-wolf terrorism.

Our research for the National Institute of Justice is built on a database containing 98 cases of lone-wolf terrorism in the United States between 1940 and 2013 (Hamm & Spaaij, 2015; note that Hamm & Spaaij, in press, extend this database to mid-2016). A total of 38 cases occurred before the terrorist attacks of 9/11, and 60 took place after 9/11. We constructed the database by assembling a mountain of open-source material, and then analyzing the material across 21 variables, generating 2,058 original data points. It is the largest and most comprehensive database ever created on lone-wolf terrorism. From the 98 cases, we faced the challenge of selecting several for case studies. Our goal was to identify the paradigmatic cases. Wieviorka (1992) suggests that paradigmatic terrorism cases are distinguished

by their unity with historical synthesis. Equally important, we were required to identify cases that were not paradigmatic. Ragin (1992) refers to this process as *delimiting* cases from the universe of cases. Understanding each paradigmatic case not only required an understanding of each delimited case, but it also fostered an appreciation for the uniqueness of all cases. Describing the reasoning behind our delimiting process may serve the broader purpose of determining what precisely is representative about paradigmatic cases in terrorism studies.

The Pre-9/11 Cases

A careful reading of the literature reveals that lone-wolf terrorists tend to see themselves as historical figures (Spaaij, 2012), and some have undeniably changed American history through their violence. Two cases from the pre-9/11 era make this point. Palestinian émigré Sirhan Sirhan's June 5, 1968, assassination of presidential candidate Robert F. Kennedy in Los Angeles cut down a prominent American statesman in the midst of what was a transformative period for Kennedy, foreclosing on a range of future options over the Vietnam War, rural poverty, and racism. And when Martin Luther King died at the hands of James Earl Ray in Memphis on April 4, 1968, part of the nation's conscience died with him.

Sirhan is significant because his assassination of Bobby Kennedy was the first major incident of political violence in the United States stemming from the Arab–Israeli conflict in the Middle East. In terms of political grievances, there is a through line from Sirhan to the lone wolves Hussein Kholya, an Iranian extremist who hijacked a plane from Texas to Mexico in 1983; Pakistani Mir Aimal Kansi, who assassinated two CIA employees outside Agency headquarters in 1993; Palestinian Rashid Baz, who fired a machine gun at 15 Jewish boys on the Brooklyn Bridge in 1994, killing one and wounding three; and Palestinian Ali Abu Kamal, who shot seven tourists on the observation deck of the Empire State Building in 1997, killing one and wounding six.

The importance of James Earl Ray to the history of American lone-wolf terrorism cannot be overstated. The King assassination directly inspired lone-wolf Joseph Paul Franklin, the only racially motivated serial killer ever pursued by the FBI, in connection with the killing and wounding of 23 people, primarily mixed-race couples, between 1977 and 1980. Franklin's murderous rages were enabled by various figures within the racist right, but none was more important to him than a friendship he formed with Jerry Ray, brother of James Earl Ray. In essence, the racially bigoted killing spree of Joseph Paul Franklin was a copycat of the Martin Luther King assassination, writ large (Ayton, 2011). Other pre-9/11 cases of racially motivated lone-wolf terrorism include Joseph Christopher's 1980 killing spree in Buffalo, New York, leaving 12 African American victims, some beheaded; Leroy Moody's 1989 Southern mail-bombing spree, injuring or killing 41 African Americans and a white federal judge; neo-Nazi Larry Shoemake's 1989 shooting rampage in a black neighborhood of Jackson, Mississippi, killing and wounding nine; Eric Rudolph's historic Southern bombing campaign, which left 120 people wounded or killed between 1996 and 1998; white supremacist Benjamin Smith's 1999 Midwestern killing spree, leaving 12 victims; Bufford Furrow's shooting at a Los Angeles Jewish Community Center in 1999, leaving six victims; and Richard Baumhammers' 2000 shooting rampage against Jews and Asian immigrants in Pittsburgh, killing and wounding six. James Earl Ray was the model for this long trail of bloodshed.

Contrast these cases to the lone wolves Floyd Simpson, a self-described Christian segregationist who murdered a civil rights worker in Alabama in 1963 over a dispute about Jesus; or the sexually confused Cleveland spree killer Frank Spisak, who dressed like Hitler

and killed or wounded four, out of what can only be described as a general hatred of the human race; or the black supremacist Ronald Taylor, a follower of Hitler and Timothy McVeigh, who killed and wounded five white people during a mass shooting in Wilkinsburg, Pennsylvania, in 2000. Simpson, Spisak, and Taylor had little influence on future terrorists, and their identities have been largely consigned to the dustbin of history. Conversely, Sirhan Sirhan and James Earl Ray are household names. They represent paradigmatic cases of lone-wolf terrorism in the pre-9/11 era. The point is this: not all terrorists are (equally) worthy of a case study. Or, to use Kenney's (2013) more formal observation, knowledge of "dark learning" is not randomly distributed among illicit actors.

The Post-9/11 Cases

Since 9/11, some things have changed and some have not. It is doubtful that history will be kind to the lone-wolf Floyd Corkins, a gay rights activist who in 2012 stormed the conservative Family Research Council in Washington intent on committing mass murder. Corkins fired three shots at an unarmed guard from close range and missed him twice before causing a slight injury. Nor will posterity likely record the name Francis Grady, who in firebombing a Wisconsin abortion clinic in 2012 caught himself on fire as security cameras recorded the whole thing, leading to his immediate arrest. Also quickly forgotten will be anti-government extremist Raulie Casteel, who fired 24 shots at passing motorists on Michigan highways in 2012, injuring one. Again, none of these lone wolves are likely to inspire future acts of terrorism.

Similar to Sirhan and Ray, lone wolves of the post-9/11 period have continued to target public figures, the most serious case being Jared Loughner's 2011 shooting of Representative Gabrielle Giffords and 18 of her supporters at a town hall meeting in Tucson. But there has been a major shift in *modus operandi* as well. This involves the targeting of police and the military. A total of 12 law enforcement officers were killed or wounded by lone-wolf terrorists in the 60 years preceding 9/11. This figure doubled in the first 13 years following 9/11, when the number of law enforcement personnel killed or wounded by lone wolves rose to 24. All of these attacks were bracketed by the years 2009 through 2013—the years coinciding with the presidency of Barack Obama.

The shootings began with white supremacist Richard Poplawski's killing and wounding of five Pittsburgh policemen inside his mother's home in 2009. A paroxysm of lone-wolf violence against law enforcement followed the Poplawski incident: Joshua Cartwright's killing of two Florida policemen in 2009; James von Brunn's firefight with officers inside the Washington Holocaust Museum in 2009; Byron Williams' shootout with the California Highway Patrol in 2010; Wade Page's shooting of a police officer eight times during his 2012 massacre at the Sikh temple in Oak Creek, Wisconsin; Thomas Caffall's shootout with police in College Station, Texas, in 2012; Christopher Dorner's rampage against the Los Angeles Police Department in 2013; followed by Paul Ciancia's slaying of a TSA officer at Los Angeles International Airport at the end of 2013. Lone-wolf attacks against law enforcement before 9/11 were motivated by black power, the Palestinian question, and abortion. Since 2009, attacks on law enforcement have stemmed from anti-government and white supremacy anger over the election of the nation's first African American president. The paradigmatic case here is Richard Poplawski.

Not a single member of the US military was targeted by lone-wolf terrorists prior to 9/11. Even at the most turbulent period of protest against the Vietnam War, lone wolves did not attack military personnel. Since 9/11, lone wolves have killed or wounded 47 members of

the military. Lone wolves have also attacked military bases or have been arrested in thwarted attacks against military installations. All of these terrorist events were bracketed by the years 2009 to 2011. In every case but one (anti-government extremist John Bedell, who shot two military police outside the Pentagon in 2010), they were conducted by al-Qaeda sympathizers infuriated over the wars in Iraq and Afghanistan.

The attacks originated with Carlos Bledsoe's drive-by shooting at a US Army recruiting center in Little Rock, Arkansas, on June 1, 2009, killing one soldier and injuring another. Bledsoe became the inspiration for Nidal Hasan's copycat attack on Fort Hood 5 months later, killing 13 soldiers and wounding 30 others in the deadliest terrorist attack against the United States since 9/11. Hasan boldly acknowledged this connection shortly after Bledsoe's attack by telling a superior officer at Fort Hood, "Maybe we should have more of these [attacks]" (Lee, 2009). Hasan, in turn, was the inspiration for Naser Jason Abdo's attempted bombing at Fort Hood in 2011. Other attacks include Yonathan Melaku's shooting spree at military facilities in Northern Virginia in 2010 and an attempted bombing of Arlington National Cemetery in 2011; Antonio Martinez's attempted bombing of the US Army recruiting center in Cantonsville, Maryland, in 2010; Khalid Aldawsari's 2010 attempted bombing of the homes of three former soldiers who were stationed at Abu Ghraib, and the Dallas home of former President George W. Bush; Rezwan Ferdaus' attempted bombing of the Pentagon with an explosives-laden model airplane in 2011; and Jose Pimentel's bombing attempt against US troops in New York City in 2011. These were all lone-wolf jihadists who either carried out or attempted to carry out attacks with identical targets, ideological motives, and religious inspiration. The paradigmatic case is Carlos Bledsoe.

Historical Synthesis

This, then, was the delimiting process used to cull four paradigmatic cases of lone-wolf terrorism from a universe of 98. Sirhan Sirhan, James Earl Ray, Richard Poplawski, and Carlos Bledsoe demonstrated comparable *modus operandi* at different points in history, marked by common political contentions. Ideologues that drew from the toxic wells of Middle Eastern politics and American anti-liberalism, they engaged those ideologies in service of a particular criminal transgression: homicide. Each of the cases is historically significant because they functioned as models for a *strain* of future terrorist attacks with similar cultural borrowings. This is what Wieviorka (1992) meant by asserting that paradigmatic terrorism cases are distinguished by their unity with an historical synthesis. The obvious point here is that paradigmatic cases should be selected for case study research, and/or other cases within the strain, since they represent the terrorist phenomenon at hand. Each paradigmatic case also evidenced a notable level of tradecraft, although the skills were not as developed as those often seen in members of terrorist groups with their elaborate training camps, terrorist manuals, and organizational resiliencies (cf. Spaaij, 2012). Even so, each paradigmatic case represented the defining criminological trait that makes terrorism tragic and dangerous: *stealth*, the ability to attack with surprise.

Ethnography in Terrorism Research

"Ethnography" is derived from the Greek *ethno*, meaning "people," and *graphos*, meaning "depict." Also known as "fieldwork," ethnography is as old as human curiosity about the lives of others. Sociologists trace its origins to the explorer Marco Polo when he recorded

his travels in China during the thirteenth century (Applebaum & Chambliss, 1997). Ethnography comes in many forms, but a common feature is that it seeks to develop a deep understanding of social practices, relationships, and meaning-making processes through direct engagement with human actors, to whom it gives center stage (Brewer, 2000; Hammersley & Atkinson, 2007).[1]

Ethnography has a limited history in terrorism research due to a variety of reasons, ranging from researcher safety and the difficulty of gaining access to terrorists, to the dreaded Institutional Review Boards (IRBs) and the fact that fieldwork is an extremely time-consuming activity. As an al-Qaeda expert put it: "If you research terrorist groups you will likely kill your academic career before it starts" (quoted in Horgan & Stern, 2013, n.p.).

The restricted use of ethnography in terrorism studies is borne out by data. Before the 9/11 attacks, Martha Crenshaw (2000:410), the acknowledged dean of terrorism research, observed that "the study of terrorism still lacks the foundation of extensive primary data based on interviews and life histories of individuals engaged in terrorism." Since 9/11, a thousand new books have been added to the terrorism literature each year. An average of four new books on terrorism is published each day; one book appears every six hours. Still, it is estimated that only 1% of these works have included direct contact with terrorists (Silke, 2008, 2014). While some intrepid terrorism researchers have conducted what is called "high-risk ethnography" (Taarnby, 2013) in such remote conflict zones as Afghanistan, Pakistan, Chechnya, Darfur, Sudan, Somalia, and war-torn Lebanon (Dolnik, 2013; Kaplan, 2010; Ranstorp, 1996), Silke's rigorous review of the literature led him to conclude that "very few published attempts have been made to systematically study terrorists outside of a prison setting" (2008:9).

Prison Ethnography

The prison offers a unique opportunity for studying terrorists. Why? To begin with, that is where many terrorists are. As of 2010, an estimated 100,000 suspected terrorists were in custody around the world (Kruglanski, Gelfand, & Gunaratna, 2010). In the United States, there were 362 federal prisoners serving lengthy sentences on terrorism-related charges at the end of 2011. Most (269 inmates) were involved in international terrorism, including dozens of al-Qaeda members and supporters, with another 93 inmates locked up for domestic terrorism (Shane, 2011). Compared with conflict zones, prisons are controlled and relatively safe environments for both the researcher and the terrorist. Once sentenced to prison, terrorists have time to rest, read, and reflect on their past behaviors. Researchers can benefit from this contemplative state and engage in detailed dialogue with terrorists, seeking answers to such vital questions as: What makes a young person adopt extremist views? How does the Internet affect that transformation? What triggers an extremist to turn violent? And what kind of signals does someone give off before turning violent? (Sageman, 2013).

Among terrorism ethnographers, there is universal consensus that academia is currently ill-equipped to handle social science research activities in high-risk environments, including prisons. Terrorism ethnography has therefore become "a highly specialized academic sub-discipline which is only performed by experienced and qualified researchers" (Taarnby, 2013:206). Next, we identify key lessons learned from ethnographic research on imprisoned terrorists.[2]

The Saudi Research

The most widely known work is Ballen's (2011) book *Terrorists in Love*, focusing on Saudi militants who once fought inside Iraq and Afghanistan. According to Ballen, in 2008, he assisted a high-ranking member of the Saudi Ministry of Interior in purchasing a condo in Washington and enrolling his son in an American graduate school. In exchange for his help, Ballen was invited to Saudi Arabia and given unprecedented access to inmates at the Riyadh Care Center—the special Saudi prison for rehabilitating jihadists. Ballen conducted life history interviews with 43 inmates, two of whom were selected for inclusion in his book. Both were failed suicide bombers—one horribly disfigured in the blast—who belonged to al-Qaeda of Iraq (the forerunner of ISIS). Interviews were conducted in the Care Center reception area in the presence of a prison psychologist and an interpreter. Each interview lasted approximately 7 hours.

Ballen is a former federal prosecutor devoted to reversing trends in Islamic radicalization, not a social scientist, and his research can be criticized on several methodological fronts. For one, it is unclear whether the selected two inmates were representative of the 43 jihadists. This leaves open the possibility that they were selected to demonstrate crucial points that the author intended to make; namely, that al-Qaeda is inherently corrupt, especially from an Islamic viewpoint. Another problem concerns the constant presence of the prison psychologist. Because the Care Center functions as a compulsory rehabilitation program, the psychologist's presence may have encouraged inmates to make pro-social statements in the hope of making a favorable impression on the psychologist. These concerns aside, Ballen's interviews offer a rare glimpse into what al-Qaeda expert Peter Bergen calls in the book's Foreword "the intangible emotional, cultural, psychological, and religious factors that are often overlooked in terrorism studies." Ballen (2011:*xiv*) attributes this success not only to his empathy for the inmates, but to the "radicals' own need to convey their stories—and to an outsider, where they would not lose face before their closest peers." Ballen discovers a therapeutic value in the life history interview. Most terrorists "feel an overwhelming imperative to justify their lives," he concludes, "whether from guilt or a psychological need to purge their inner demons—or … from deeply held religious beliefs … they believe it is a duty of their faith to share [their stories] with others" (*xv*). Ballen's work is consistent with research showing that terrorists who have disengaged from their movements are willing to disclose information based on life history interviews (Horgan, 2013).

The Israeli Research

The need for radicals to "convey their stories" is confirmed by a study of imprisoned terrorists in Israel. Between 2004 and 2006, Berko and associates (2010) conducted interviews with 26 female Muslim Palestinian prisoners in custody of the Israel Prison Service. Of these, 16 were members of Hamas or Fatah who had committed terrorism offenses (all at the direction of male dispatchers)—eight were would-be suicide bombers, and eight had aided and abetted terrorists. The remaining 10 subjects were conventional criminals. The terrorists were interviewed in wings (cellblocks) of a prison designated for security prisoners. At first, the terrorist inmates were reluctant to speak with researchers, believing that the interviews were an attempt by the Israeli authorities to interrogate them or acquire additional information on their mission or contacts on the Arab street. The researchers overcame this reluctance by persuading inmates to tell their life stories as part of an

academic study. "Once they felt confident that the interview involved academic research," note the authors, "and as they realized that the questions focused on their private lives, social experiences and personal views, their hesitation to talk dissipated" (Berko et al., 2010:674). The researchers went on to discover differences between terrorists and conventional criminals regarding personal background factors and the manner in which their crimes were influenced by the Israeli–Palestinian conflict. Most notably, criminal women saw themselves as outcasts in their own communities and expressed a desire to be integrated into a Western-oriented society such as Israel; while terrorist women viewed their acts as honorable and logical outcomes of their political oppression and expressed negative attitudes toward Israel.

Likewise, beginning in 2002, Merari (2010) led a pioneering study of imprisoned male Palestinian would-be suicide bombers belonging to Hamas, Palestinian Islamic Jihad, and Fatah (see also Schweitzer, 2013). Notably, 12 prisoners were asked to participate in the research, and 11 agreed. Crucial to this recruiting success was the support of the prison service staff that accompanied researchers into the wings, arranged convenient places for the interviews to take place, and helped to convince prisoners that the researchers were not undercover government agents but academics. The research plan was based on the idea that "the way to reach the deepest feelings and thoughts of the surviving suicide bombers [was] by means of open and informal direct interviews held over a longer period of time and not in a single meeting" (Schweitzer, 2013:79). The study produced biographies of each terrorist, focusing on motivations for the suicide attacks (including money for their families, personal revenge, and religion and heaven). While Merari found no dominant motive for suicide bombings, he concluded that the critical personality element involved in terrorism is "the youngster's vulnerability to external influence" (p. 146).

The American Research

Two American studies involve fieldwork with imprisoned terrorists. The first is Hamm's (2013) research, considering the premise that US prisons are fertile grounds for recruiting terrorists. Life history interviews were conducted with 30 felons who had undergone conversions to Islam and various white supremacy faiths during their incarceration, including members of a fringe group of Sunni Muslims at California's New Folsom Prison, called *Jam'iyyat Ul-Islam Is-Saheeh* ("The Assembly of Authentic Islam," or JIS), who from their prison cell organized a terrorist cell intent on attacking US Army recruiting centers, Israeli government facilities, and synagogues in Los Angeles on the symbolic date of September 11, 2005. Interviews were arranged by prison chaplains and gang intelligence officers. Each interview lasted roughly 90 minutes and was conducted inside prison chapels with no officers, chaplains, or other inmates present. Several cases were drawn from the interviews and examined for trajectories or "turning points" leading to radicalization. The research examined the extent to which turning points were embedded in experiences deriving from prison social networks, clandestine communication systems, radical religious beliefs, and the influence of charismatic inmate leaders—all of which can enable the transformation of an individual's criminal tendencies into terrorist causes. Because transformations are, by definition, human processes, inmates do not "snap" and become radicalized. Rather, the prison experience slowly influences inmates to adopt extreme political views, often through a series of "escalation thresholds," and possibly to commit later terrorist acts.

The other American study is Stern's (2003) analysis of the "lone-wolf avenger" Mir Aimal Kansi, a Pakistani immigrant to the United States who assassinated two CIA employees in 1993. In 1999, Stern wrote to Kansi at the Sussex One State Prison in Virginia where he was on death row, requesting to speak with him. Stern began exchanging letters with Kansi, and Kansi responded with enthusiasm about the prospect of meeting Stern. Stern continued the correspondence for 5 months, and, in late 1999, she was allowed onto Sussex death row to interview Kansi. Because of the rapport she had built during her letter writing, Stern was able to directly ask Kansi about his motive for attacking the CIA employees. Other questions followed, exploring Kansi's childhood, parental influences, education, religious experiences, favorite literature, and his obsession with Osama bin Laden. This was in 1999, 2 years before bin Laden captured worldwide attention with the 9/11 attacks. Still interested in the factors that led to Kansi's terrorism, upon leaving death row Stern continued her correspondence with Kansi until his execution at Sussex in 2002. Stern's study would provide an essential principle of lone-wolf terrorism research a decade later. "Lone wolves often come up with their own ideologies that combine personal vendettas with religious or political grievances," she wrote (p. 172).

By and large, however, researchers have been denied access to the US prison system for the purpose of interviewing terrorists (see Monahan, this volume). Overcoming this challenge demands not only a comprehensive research management plan, but also persistence and a commitment to working within the system. The research process begins by identifying a pool of potential terrorist inmates for interviewing and finding out through open sources where those terrorists are imprisoned. Terrorists are incarcerated at all levels of the American correctional system—from the Bureau of Prisons (BOP) to state facilities and even county lockups. Each correctional system will have policies on the written application process for gaining access to inmates. Applications must recognize exchange theory (Emerson, 1976), showing how research access to terrorist inmates will somehow benefit the correctional system in terms of security and staff training surrounding such vital issues as prisoner radicalization and the potential terrorist threat emanating from prisons. Any attempt to skirt the formal application process—such as trying to influence decisions by arranging an informal meeting with agency officials either prior to making an application or after one has been declined—will be perceived as an effort by the researcher to seek special treatment, and will be automatically denied. Being denied access to one correctional system does not imply denial by all systems, and the researcher must be flexible enough to change direction when necessary, pursuing available options relentlessly. Also, being denied access to terrorist inmates for one research project does not necessarily mean that all projects will be denied. Hamm's (2013) research on prisoner radicalization was denied by the BOP in 2007, yet several years later the BOP approved his access to lone-wolf terrorists in federal maximum-security prisons across the country (Hamm & Spaaij, 2015, in press). In short, there is no substitute for hard work and following the rules.

Implications for Prison Ethnography

The implications of this literature for the ethnographic study of incarcerated terrorists are as follows:

- Official support for the project is crucial. Most importantly, the project must be supported by prison staff.
- The intentions of the research must be clearly communicated to prison staff and inmate participants. This includes a management plan for conducting interviews with inmates.

The plan must specify the location and duration of the interviews; the identification of those present during the interviews; and a time schedule for the research.

- Researchers must investigate the inmates in advance, finding specific information on them. A period devoted to mail correspondence with the inmates should precede the interviews. This phase is necessary for establishing rapport with the prisoners and creating an open and productive atmosphere.
- Researchers should choose quality over quantity. Multiple interviews/letters of correspondence with the same inmate are preferable to multiple interviews/letters with as many prisoners as possible. Similar questions must be asked of all prisoners participating in the study.
- The purpose of the correspondence and interviews is not to simply collect information, but to elicit data that can be used in academic analysis.

Structuring the Prison Interview

Post (2008:9) has famously argued that most terrorism researchers "have never laid eyes upon a terrorist, much less spoken with one." He is right, of course, but it is also worth remembering that interviewing terrorists is not a skill taught at universities. Dolnik (2013) further contends that academics are not a group widely known for their interpersonal skills, which is why they are often stereotyped as socially awkward. He goes on to note that "most academics are not very good listeners," and, in interviewing terrorists, "academics will typically find themselves talking precisely to simple, not very well educated men … who tend to have a very one-dimensional view of the world" (p. 242). Our research on incarcerated terrorists offers several suggestions in this regard.

Foremost is that academics must learn how to become active listeners. In prison, the old saw that "God gave you one mouth and two ears for a reason: You should listen twice as much as you talk" is not an empty slogan. Active listening is a requirement for empathy, the knowledge of the plight of another, and the basis for *thick description* (also known as emic interpretations), conveying in academic writing what experience itself would convey (Bourgois, 2002; Geertz, 1973). Following Max Weber, cultural criminologists call this *Verstehen*, denoting a process of subjective interpretation on the researcher's part, or a degree of sympathetic understanding between researcher and subjects of study (Ferrell & Hamm, 1998). It is within this context that the face-to-face prison interview achieves its superiority as a research method in terrorism studies. It allows the researcher to make a connection, not to a "subject," but to another human—in this case, a terrorist. Prison ethnography is more than interviewing, though, since fieldwork also allows the researcher to make contemporaneous observations on inmates' speaking styles, sibilance, the way they handle memories of joy and sorrow, the physical and psychic toll prison has taken on them, how they carry themselves around other prisoners, and what guards may say about them. These interviews and observations are the essence of primary data on terrorism because it represents information that has never been seen in open sources.

Successful interviews are retrospective and semi-structured, covering a range of life history "storylines" (Agnew, 2006). Life-course criminology is especially suited to this task due its capacity to encompass a broad range of theoretical elements across the entire discipline of criminology. The influence and analytical power of life-course criminology is so substantial that one prominent theorist has argued that "Life-course criminology is

now criminology" (Cullen, 2011:310). Terrorism scholars working from both quantitative (Freilich et al., 2014; Kerodal et al., 2014) and qualitative perspectives (Bjorgo, 2013; Hamm, 2012, 2013) have incorporated the life-course framework into their studies.

For terrorist inmates, life history interviews address such questions as living arrangements since adolescence, education and school experiences, employment history, physical and mental health, social relations (including gang involvement), military experiences, drug use, engagement with the criminal justice system, the inmate's search for identity through religion and politics (especially influential books and Internet sources), and the social networks that made possible their immersion in extremist ideology. For each of these areas, prisoners may be prompted with this essential turning point question or some variant thereof: "What experiences would you say have been important for you, considering the way your life is today?"

Interview data are documented in field notes, and only pencil and paper are used. No tape recorders are used since they are normally banned by prison security. No *quid pro quo* is offered to prisoners for their participation, such as cash payments or favors. Moralizing about an inmate's political or religious beliefs is counterproductive, no matter how offensive they may seem. Being honest and treating everyone with respect are crucial to any ethnographic project.

The majority of interview questions follow from inmates' spoken narratives about their lives. Questions must therefore be kept as open as possible, allowing the prisoners to mention and develop topics for themselves that they are not asked about. This technique allows researchers to summarize what the inmates have said, encouraging them to elaborate on it or adjust it if they want to. The feedback technique will not only clarify what the inmate intended to say, but it will help establish trust by showing that the researcher is attentive and interested in the inmate's life story. In this way, any tendency on the researcher's part to force the narrative forward will be controlled, since the inmate will naturally do it by himself or herself.

It is important to remember that interviews with terrorist inmates are not freewheeling conversations. They are semi-structured, guided discussions intended to reveal information on how a person *evolves* into a terrorist. As such, most questions relate to the period leading up to the terrorist event, or to the "left of bang." By keeping this focus, the researcher can determine whether, for example, terrorists integrated personal frustrations with wider political, social, and/or religious causes.

These techniques only work, of course, if terrorist inmates voluntarily agree to participate in a study. Researchers stress the importance of effective recruitment methods, and they are essential, but the fact is that some terrorists will refuse to participate regardless of recruitment methods. Some will refuse because they have legal cases pending, some will refuse because they do not want the attention, some will refuse because they are completely unfamiliar with social science research, and some will not participate unless they get something out of it such as money, a conjugal visit, or even release from prison. Some terrorist inmates will only agree to exchange correspondence, with no interest in an interview (in which case the researcher should use the correspondence). And still others will issue *de facto* refusals because they will not sign mandatory informed consent statements, especially when the research is government-sponsored. This is the least surprising reason of all. Terrorist inmates typically demonstrate contempt for state authority (contempt for government is, by definition, a core terrorist belief), and that includes official forms. And so it is. To paraphrase a former US Defense Secretary, you must study the terrorist you have, not the terrorist you might want.

When confronted with these setbacks (and we have experienced them all!), researchers have only one option, and that is to move on to other relevant cases. This is why we focus on paradigmatic cases and others within a strain of terrorism that can serve as backup cases to be explored when selected inmates refuse to participate. Failing that, researchers can still fall back on open sources. After all, the research goal is to produce insightful, well-written case studies of terrorism. Interviews are a means to that end, not an end in itself. Virtual ethnography and other online research methods can be valuable complementary methods in this regard, especially considering the growing volume of online activity among (would-be) terrorists (e.g., Hamm & Spaaij, 2015, in press).

Interpreting Primary Data

No matter what primary data is gathered from terrorist inmates, be it interviews/observations or correspondence only, a problem common to all qualitative research is validation. This will manifest itself in the prisoners' recounting of turning points in their process of violent development. Recounting is prone to attribution error, social desirability, prior substance abuse, the effects of time on memory, and potential mental illness. It is also prone to prevarication and manipulation. The data collected from terrorists will therefore represent only the recreation of turning points as each prisoner comprehends them at the moment. The recounting is not necessarily an accurate and objective portrayal of the turning points as they were experienced in real time. Researchers typically control for threats to validity by triangulating data. Two triangulation methods may be used. First, the primary data can be compared with statements of people with knowledge of the inmates at the time of their turning points. Because terrorist inmates have been the focus of media attention, law enforcement investigations, and legal proceedings, statements from parents, friends, classmates, and spouses can be found in open sources. Second, assuming that there is some sociological pattern to the turning points leading to criminal violence—and research on life-course theory suggests that there is (Laub & Sampson, 1993)—the terrorist inmates in a study can be compared with one another.

Finally, the validity of primary data on terrorists may be vulnerable to a bias in researcher/subject interactions (Horgan, 2004). As Merari (2010:103) notes about the Palestinian would-be suicide bombers, prisoner responses "may be skewed by their desire to impress the interviewers favorably." To control for this, throughout the data analysis, the logic of analytic induction may be applied, searching for "negative instances" that challenge the researcher to progressively refine empirically based statements of terrorist inmates (see Katz, 1983). This method will allow the researcher to dig back into the data and look for responses that might have been prejudiced by a researcher/subject bias.

Conclusions

This chapter contributes to the recent move by terrorism scholars to openly discuss and evaluate their research methods in an effort to improve the quality of fieldwork on terrorism (Dolnik, 2013; Horgan, 2013; Kenney, 2013). It has also been an exercise in demystifying various aspects of terrorism research, beginning with the myth that quantitative and qualitative researchers have nothing in common. Among qualitative researchers, it is generally assumed that even one case study of a terrorist provides empirical support for the conceptualization of terrorism. However, this suggests that any case study will do, and that

the limitations of opportunity sampling do not apply to terrorism research. Both assertions are wide of the mark. Our analysis of lone-wolf terrorism indicates that not all cases are created equal. The paradigmatic case study approach, in particular, holds greater promise for the terrorism studies community than has previously been acknowledged.

Another exploded myth is that terrorism research is best conducted through high-risk ethnography in conflict zones. How else, we might ask, can researchers better understand a young man who joins al-Qaeda in the Arabian Peninsula (AQAP) than by traveling to Yemen and interviewing an AQAP member? Yet, first-hand accounts paint a different picture. For instance, Dolnik (2013:246–247) concludes that "The majority of time spent in conflict zones involves procrastination, frustration, and idleness, combined with a myriad of phone calls to contacts, and followed by endless hours and days of waiting for a phone call that may or may not be returned. … This state of 'confusion' and 'uncertainty about anything' is possibly the greatest 'danger' of field research." We have argued that the prison offers a viable alternative because the researcher has greater control over uncertainty, if the research is effectively managed. To be sure, prison research on terrorism has its share of problems, but phone calls to gatekeepers are usually returned. If not, e-mail is a click away. And prisoners either agree to participate in a study or they do not. There is no confusion about that. Nor does prison research really represent "high-risk ethnography," inasmuch as there is no evidence that a researcher has ever been harmed or threatened behind bars. In the final analysis, even the worst of prisons may be safer than the best of conflict zones.

Yet, the fact remains that the dangers of terrorism research are real, and the greatest threat may come after research is published. In 1980, the Italian professor Sergio Lenci was attacked in his Rome architecture studio by members of the leftist terrorist group Prima Linea. Lenci was tied, gagged, shot in the head, and left for dead. Although a motive was never confirmed, Lenci survived the assault, and went on to write that his attackers may have been outraged by the prison design work that Lenci had published years earlier, which had come at the detriment of imprisoned Prima members (Glynn, 2013). His story is a cautionary tale for us all.

Acknowledgments

Notes

1   Such engagement can vary from longer-term immersion in conventional ethnography to a process of more intermittent engagement, such as, for example, in virtual ethnography, which "transfers the ethnographic tradition of the researcher as an embodied research instrument to the social spaces of the Internet" (Hine, 2000:257).
2   For a creative approach to the study of terrorists released from prison, see work by Orsini (2013).

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Social Network Analysis and Terrorism

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Introduction

In 2006, Omar Hammami (Abu Mansoor al-Amriki, or "the American"), an American-born citizen, moved to Somalia to engage in jihad. Shortly after arriving, he began networking with individuals who shared his socio-political ideologies and desire to engage in jihad against the Western world (Federal Bureau of Investigation, 2012; Bouchard & Nash, 2015). These individuals introduced Omar to the leaders of al-Shabaab. His computer skills and ability to speak English fluently allowed Omar to use the Internet as a key recruiting tool for the group, and he quickly rose up in the ranks of al-Shabaab, becoming a commander (BBC, 2013; Dagne, 2011). In 2013, al-Shabaab, the same network that radicalized and gave Hammami a home, killed him (Bouchard & Nash, 2015). While this case exemplifies how social networks and networking tools are integral to radicalization and terrorist recruitment, it is not unique. To better understand how terrorist networks function, this chapter introduces the intersection of terrorism studies and what Papachristos (2009) has called a "networked criminology."

While social network analysis (SNA) has been popular in public health and sociology since the early 1990s (Papachristos, 2009), it has only recently been used in criminology (Malm & Bichler, 2015). The past decade has seen SNA used to study organized crime (Malm & Bichler, 2011; Morselli, 2009), white-collar crime (Nash, Bouchard, & Malm, 2013, Forthcoming), and, most recently, cybercrime (Joffres & Bouchard, 2015). Papachristos (2011) also encouraged the application of SNA to dark networks, explaining that SNA "offer[s] us new directions in understanding the etiology of criminal groups, organizations, and contexts" that are opaque (p. 112).

Given the relatively recent shifts in the structures, goals, and tactics of terrorist organizations, SNA has distinguished itself as a useful tool in the study of terrorism. Historically, terrorist groups were easily identifiable organizations with defined structures and objectives. In most cases, both the goals—whether political, economic, or social in nature—and the command structures of these organizations were visible. In more recent years, however, not only have the goals and structures of terrorist groups evolved and changed, they have also

become more opaque (Hoffman, 2002). Whereas "traditional" terrorist groups had defined structures, leaders, and objectives, "new" terrorist groups "embrace far more amorphous religious and millenarian aims and wrap themselves in less-cohesive organizational entities, with a more-diffuse structure and membership" (Hoffman, 2002, p. 9). This decentralized nature of current terrorist networks makes the application of SNA timely.

This chapter is designed to briefly introduce the reader to SNA, and then highlight several studies that utilize SNA to investigate terrorist and other dark networks. These studies underscore the effectiveness of applying SNA to mapping the underlying structures of terrorist networks and informing and implementing counterterrorism policies.

SNA

One of the main reasons why SNA methods have gained popularity in criminology is that they are better able to measure social structure and social influence than traditional methods. SNA allows for interdependency among data in a way that standard statistical methods cannot. And, since crime and deviance exist in a social world that is inherently interdependent, it would appear SNA is not a method *du jour*, but rather here to stay. This section is designed to quickly orient the reader to basic SNA terminology. While we try not to burden the reader with unnecessary jargon, some definitions are important to understand for even the most cursory reading of SNA literature.

The primary utility of SNA is to better understand the dynamics of group formation and social influence. Basically, social networks are a set of *nodes* (e.g., people, organizations, countries) linked by one or more types of *ties* (e.g., friendship, kinship, group membership). Visualizing and analyzing the structures that arise from such connection patterns form the basis of SNA. The main tenet is that understanding the social structure in which people are embedded adds a necessary element to understanding human behavior, and may be more informative than standard attributes, such as age, gender, or socio-economic status (Knoke & Yang, 2008).

Networks tend to have common structures that influence a group's function and operation. For instance, star-like structures are highly centralized, with each node connected to one critical node. Chain structures are more dispersed, with each node connected to one or two others in a chain (Bichler & Bush, 2015). The *small-world theory* implies that people are more easily reachable and information can travel more easily through centralized networks with star formations. Another theoretical concept often used in SNA is *density*, which is simply the proportion of ties that are observed divided by the number of all possible ties. Research shows that increased density leads to increased resiliency because the removal of one node does not break the network down since there are several other ties to compensate for the removal (Everton, 2012; Koschade, 2006). Tied to this concept of node removal and resiliency is fragmentation. *Fragmentation* represents the amount of the network that becomes disconnected from the group if you remove one key node, or a set of key nodes.

While SNA provides several structural measures to choose from, many researchers using SNA use centrality statistics when measuring an actor's importance and/or position in a terrorist network. The two most commonly used are degree and betweenness centrality. *Degree centrality* is the number of direct ties connected to each node. Nodes with high degree centrality are suspected to be the most active in the network, simply because they have the most direct connections. *Betweenness centrality* is the number of times a node lies on the shortest path between all other possible nodes in the network. Actors high in

betweenness scores are said to be *brokers* who control the flow of information or resources in the group (Bichler & Bush, 2015).

Finally, before moving on, there are a few network theories commonly used in SNA and terrorism research that need quick explanation. Granovetter's (1973) *strength of weak ties* concept is often used to explain terrorist network resiliency. According to Granovetter, strong ties are relationships in which individuals invest a considerable amount of time and energy to maintain, such as family and close friends. In contrast, weak ties do not require much time and intimacy, such as acquaintances. Nodes connected through strong ties exist in similar social circles, whereas nodes connected through weak ties can introduce one another to different groups. Therefore, weak ties are the key to innovation, adaptability, and increased social influence. Burt's (1992) concept of *structural holes* is also used in terrorism research. Burt expanded on the notion of brokers by suggesting that individuals who operate as brokers between two cohesive groups have increased social capital because they control the flow of information and/or goods. Finally, a common network theory applied in terrorism research is small-world theory (Everton, 2012; Krebs, 2001; Sageman, 2004; Xu & Chen, 2008). *Small-world theory* states that society is closely connected, and that most individuals can reach others through about six degrees of separation (Watts, 2003). Small worlds with short degrees of separation between people exist to quickly and easily spread information through a group, or even a society. Small-world theory also states that people cluster with other individuals similar to them in terms of demographics (homophily) and social position (i.e., hubs with high degree centrality tend to connect to other hubs) (Bichler & Bush, 2015).

Now that these very basic network terms and theories have been reviewed, the reader is better equipped to understand how SNA can help us understand terrorist groups. We begin by explaining how SNA has been influential in reframing how terrorist groups are defined. We then review research that investigates the security/efficiency trade-off and how SNA can help explain resiliency and roles in terrorist networks. Finally, the chapter explores recent innovative trends in combining SNA with data mining, longitudinal design, and spatial analysis, all in an effort to better understand terrorist organizations. We conclude with a brief discussion on the limitations of SNA for analyzing terrorism.

Influence of SNA in Characterizing Terrorist Group Structure

The emergence of SNA concepts and methods in criminology has had an important impact on how researchers characterize terrorist groups. For instance, as organized crime researchers did in the past (Dorn, Oette, & White, 1998), many terrorism researchers now distinguish between two models of terrorist groups—the network model, characterized by flexible and loosely structured groups, and the hierarchical model, which has clearly defined roles and division of labor (Everton, 2012; Sageman, 2004, 2008). Networked groups do not centralize power or decision-making to one person or sub-group, but rather disperse them over a number of individuals. This type of group is also known as decentralized. Magouirk, Atran, and Sageman's (2008) analysis of the Jemaah Islamiyah (JI) network from its birth in the 1990s through the following decade illustrates how a network originally viewed as hier-archical with limited leadership developed into a loose network with several individuals who took on "leadership" functions. Magouirk et al.'s (2008) research helped to debunk the popular conception among researchers and practitioners alike that JI was led by one person. Using the SNA metrics of centrality and K-core analysis to identify network hubs, Pedahzur

and Perlinger (2006) were able to analyze suicide networks from a decentralized perspective (horizontal). They found that suicide networks are local and cross-organizational, with members coming directly from the communities in which they operate, particularly from friends and family. They also found that members had no prior ties to any specific organization, further supporting the decline of the hierarchically organized terrorist network. Within these horizontal suicide networks, Pedahzur and Perlinger (2006) posit that, even though centralized hubs bind the network components (logistics, intelligence, recruitment, and dispatching), targeting the centralized hubs will not be an effective method to extinguish these networks due to the peripheral nature of the suicide bombers themselves. This research is indicative of the power SNA has to uncover the internal organization of terrorist networks and how it is sometimes at odds with traditional and sometimes inaccurate assumptions.

Resiliency and the Security/Efficiency Trade-off

After 9/11, and in response to traditional counterterrorist measures, some terrorist groups such as al-Qaeda have become decentralized, loosely connected networks. They are now more adaptive, resilient, and formidable to traditional counterterrorist measures, including an increasing presence on the Internet (Conway, 2006; Denning, 2011; Hoffman, 2005; Lewis, 2005; O'Rourke, 2006). Some networks achieve this resiliency by favoring security and avoiding establishing excessive links within the network (i.e., maintaining low density). This structure is achieved via several compartmentalized cells (see Arquilla & Ronfeldt, 2001), and the low density makes terror networks difficult targets for law enforcement efforts. The fewer ties in a network, the more compartmentalized information is within the network, and thus the removal of a node is unlikely to do much in terms of disrupting the entire network. On the other hand, some networks achieve resiliency by favoring the efficiency offered by a scale-free structure, where some actors in a network are well connected while others are not. More specifically, scale-free networks are distinguished by a small number of well-connected individuals, or hubs. These hubs, however, are potential weak spots in the network. While hubs in such networks appear to be relatively immune to random attacks, their role as conduits of information in the network makes them vulnerable to targeted removal (Helfstein & Wright, 2011; Barabasi, 2009; Sageman, 2004; Xu & Chen, 2008). These networks favor efficiency over security. This section details some of the research exploring the security/efficiency trade-off in terrorist networks.

Not surprisingly, the attacks of 9/11 strongly encouraged the application of SNA to the study of terrorist networks. The initial application of SNA by Krebs (2002) focused on al-Qaeda and the networks of notable actors within the organization. In this landmark study, Krebs assessed the difficulty of mapping and identifying covert al-Qaeda cells. Using manually collected public data (i.e., news reports, websites, television) and official documents from the US Department of Justice, Krebs examined the network of hijackers responsible for the 9/11 attacks, marking one of the first attempts at mapping out a terrorist network. Rather than attempting to collect a complete network of all 9/11 terrorists, which he found to be inefficient and prohibitive, he identified direct contacts who provided money, information, and knowledge directly to the main group of 19 terrorists, but did not accompany them on the planes. Krebs found that, while the main group was strongly tied to several of these individuals, they were not necessarily directly tied to each

other, and many were not even connected to those individuals on the same plane. This finding emphasized how covert or dark networks trade efficiency for secrecy. Krebs' (2002) research also showed just how important strong ties are to terrorist networks, as these ties keep the cell connected and alive. In contrast, weak ties are kept to a minimum, as they threaten the covertness of terrorist networks, thus increasing the likelihood of visibility and disruption.

Using SNA techniques similar to Krebs (2001, 2002), such as network size, centrality, density, and clustering, Koschade (2006) mapped the communication structure of the JI terrorist group, which was responsible for the 2002 Bali bombings. Koschade (2006) was able to identify key actors in the network and specifically measure "the level of each cell member's activity, ability to access others, and the control over the flow of information within the network" (p. 571). He also identified individuals who, if captured, would compromise the network.

SNA research on terrorist groups shows that the security/efficiency trade-off is not clear-cut (Helfstein & Wright, 2011; Everton, 2012). For example, Helfstein and Wright (2011) took the idea of the security/efficiency trade-off one step further by comparing the structure of six separate attack networks. They found evidence for and against both the security and efficiency arguments. Building off Granovetter's (1973) landmark work on the strength of weak ties and applying metrics similar to those used by Helfstein and Wright (2011), Everton (2012) distinguished between provincial and cosmopolitan networks. Provincial networks are characterized by high density, levels of clustering, and a number of strong ties. By contrast, cosmopolitan networks are defined by low density and levels of clustering, but a high number of weak ties. Moreover, networks at either end of this spectrum operate poorly and ineffectively when compared with networks that have struck a balance. Therefore, in relation to connectivity and cohesion, illicit networks need to balance characteristics of both cosmopolitan and provincial networks. A mix of weak and strong ties is beneficial at both the individual and organizational levels, but striking a balance largely depends on the network's immediate environment (Everton, 2012). For example, the amount of trust that results from high connectivity and cohesion increases the likelihood of risk taking, but too much connectivity and cohesion can cause the network to stagnate and not adapt to changing conditions (Everton, 2012; Tucker, 2008). In other words, successful terrorist groups strike a balance between security and efficiency.

Several studies have used the security/efficiency argument to inform interdiction strategies by examining how network structure directly affects resiliency to attack. Bakker, Raab, and Milward (2012) contributed to the application of SNA to terrorist networks via a comparative study of Umkhonto we Sizwe (MK) of South Africa; the Revolutionary Armed Forces of Colombia—People's Army (FARC); and the Liberation Tigers of Tamil Eelam (LTTE) of Sri Lanka. Specifically, Bakker et al. (2012) were concerned with understanding and explaining the varying degrees of resiliency across different terrorist networks. Examining various network characteristics, such as resources (the available assets of a network) and legitimacy, along with network capacity and moderating variables (centralization and motivation), they uncovered three different responses by terror groups after being targeted by massive attacks: (1) some groups remain robust and no apparent reduction in operations occurs; (2) some groups initially reduce operations, but then recover; and (3) some groups simply disappear.

Enders and Jindapon (2010) developed a model to compare and analyze centralized versus decentralized network structures for terror networks, ultimately concluding that a centralized network is more resilient. Compared with decentralized network structures,

centralized networks with numerous decision-makers were more likely to be more productive, more resilient to counterterrorism efforts, and to remain strong despite changing circumstances.

Roles in Terrorist Organizations

Still other SNA studies have examined the roles and relevance of certain types of ties to specific terror networks (Sageman, 2004; Everton & Cunningham, 2012). In a study of the global Salafi jihad (including the Southeastern Asian group Jemaah Islamiyah), Sageman (2004) detailed the importance of trust-based ties, such as friendship, kinship, discipleship, and worship ties for the formation, growth, and evolution of terrorist networks. Using the case of the conspirators from al-Qaeda's millennial plot (terrorist attacks against Jordanian and American targets planned to occur around January 1, 2000), Sageman (2004) demonstrated that, contrary to prior beliefs regarding recruitment, the plotters were not brought together as a result of top-down recruitment, brainwashing, or religious zealousness. Instead, the majority of Sageman's sample became involved with jihad through their own volition and via friendship networks. Feeding off each other's zealousness, the militant rhetoric, strength, and overall intensity of the network increased. Similarly, kinship ties such as spousal, in-law, and sibling ties have been identified as common paths to involvement with terrorist networks. In the case of JI, it appears that kinship ties were largely responsible for holding the network together, with the network even appearing as one very large extended family (Sageman, 2004). According to Sageman, this was in large part achieved by strategically arranging marriages to establish alliances and solidify the ties in the network.

Discipleship (Sageman, 2004) or mentorship (Everton & Cunningham, 2012) ties—such as educational, technological, supervisory, or ideological and worship—are other types of affiliations seen in terrorist networks. These types of ties are especially apparent in the Southeast Asian cluster of the global Salafi jihad, as the origins of JI can be traced back to two boarding schools in the region that educated students on the ideological and technical aspects of jihad: Pondok Ngruki in Indonesia and Pesentren Luqmanu Hakiem in Johor, Malaysia (Sageman, 2004). These institutions served as breeding grounds for JI extremists and militants, with Noordin himself attending lectures at Luqmanu Hakiem, beginning in 1995. Many of the individuals Noordin later recruited to carry out his attacks had direct ties to these boarding schools (Sageman, 2004). According to Sageman, "the critical and specific element to joining the jihad is the accessibility of a link to the jihad" (p. 120). Not only are the aforementioned types of ties responsible for the creation of cliques within the larger jihadi movement, but they also link separate cliques together, providing the movement with the manpower and resources necessary to pose a global threat (Sageman).

The work described in the preceding text shows how SNA might provide the necessary foundation for counterterrorist and intelligence organizations to predict terrorist cell structures and uncover strengths and weaknesses of ties among group members. This relatively new technique, to criminology anyway, could potentially help identify previously unknown relationships between events, locations, and the individuals involved in several attacks. The application of SNA to terrorist networks has also benefited from the advent of automated data extraction technology (Bouchard & Nash, 2015). The following section details research that utilizes such automated technology to inform counterterrorism strategies and to better understand the dynamic nature of terrorism, consisting of decentralized groups that communicate, recruit, plan, and fund terrorist attacks through the Internet (Bouchard & Nash, 2015).

Data Mining, SNA, and Terrorism

Just as the population at large is using the Internet to inform and communicate with one another, so too are terrorist groups. The Internet has helped to create a more diffuse, decentralized form of terrorist group. These more diffuse networks are difficult to detect, making it difficult for law enforcement to design and implement counterterrorist measures to identify and apprehend terrorist groups and the individuals involved within online networks (Conway, 2006; Lewis, 2005; Weinmann, 2006). In essence, it has become clear that terrorists are using the decentralized structure of the Internet to their advantage and using the Internet to further exploit the benefits of a network design. Research and development must now turn to new advances in information technology and SNA to design and implement useful counterterrorist measures to fight dynamic terrorist networks using the Internet to spread violence (Helfstein, & Wright, 2011).

Various databases that collect information on terrorist incidents exist (in particular, see the National Consortium for the Study of Terrorism and Responses to Terrorism's Global Terrorism Database, 2012). Other organizations have created databases that collect information on extremist/terrorist websites (e.g., Artificial Intelligence Lab, SITE Institute, the Anti-Terrorism Coalition, and the Middle East Media Research Institute). However, the majority of these databases involve the manual identification and collection of relevant websites, much like that of Kreb's study of the 9/11 terrorist cells mentioned earlier. While manual data collection ignited the field of SNA and terrorism, new efforts in automated data mining have kept the field growing. Zhou, Qin, Lai, Reid, and Chen (2005) proposed one of the first semi-automated data mining methodologies for identifying, classifying, and organizing extremist website data. They proposed the Dark Web Attribute System (DWAS) to facilitate the use of SNA in identifying terrorist and extremist websites. The DWAS project incorporates multilingual data mining, text mining, and web mining techniques to accumulate the most comprehensive collection of data generated by terrorist groups across the globe, including websites, videos, forums, chat rooms, blogs, and social networking sites (Artificial Intelligence Laboratory, 2014).

The DWAS project has since spawned several SNA studies on the nature of terrorists' use of the Internet and their online networks. For instance, Xu, Chen, Zhou, and Qin (2006) applied network topological analysis methods to study the design of online terrorist networks. Examining the structural characteristics at the web page level of three differing extremist websites (US-based, Latin-American-based, and Middle-East-based), Xu et al. found that all three were small-world and scale-free, and that smaller websites sharing more similar ideologies and information formed stronger inter-website linkages. More recently, however, the Artificial Intelligence Laboratory (2014), via the DWAS project, has provided access to data extracted from jihadist dark web forums. Via their new dark web portal, one can download data retrieved from these terrorist/extremist online forums and run preliminary SNA visualizations. Databases such as the DWAS project and the use of SNA to analyze extremist website content can further inform counterterrorism research and policy, especially in terms of disrupting online networks and intelligence-gathering on terrorist network operations.

The Terrorism and Extremism Network Extractor, or TENE, may be the next technological advancement in information technology and, in conjunction with SNA, may help identify and analyze terrorist networks by differentiating terrorist/extremist websites from other related websites on the Internet (Bouchard, Joffres, & Frank, 2014). Through the input of pre-determined keywords found within a webpage, this custom-created computer program,

designed by Bouchard et al., is an automated web crawler that browses the Internet, assembling specified information about web pages containing terrorist and extremist content. User-defined conditional limits create boundaries for this crawler, thus keeping the program from crawling endlessly across the Internet. These predetermined conditions also make sure the network content remains relevant to the search and extraction purposes. User-defined conditions include: (1) the number of web pages retrieved; (2) fixed network size, such as a specified number of websites in the network; and (3) terrorist and extremist keywords defined by the literature as relevant (Bouchard et al., 2014). These conditional limits also set boundaries on the web crawler, creating a network of significant terrorist and extremist websites, as well as keeping the size of the network manageable for network visualization and analyzing software such as UCINET or Pajek. This results in a relational network of web servers and web pages such that the data retrieved on the Internet by the web crawler can be used to map and analyze terrorist and extremist networks. This process operates automatically, with little input from the user—the TENE web crawler is left to crawl, building a network of web servers, web pages, and links of terrorist and extremist activity on the Internet. In a trial run of TENE, four websites were analyzed, looking for keywords deemed as "terrorist" or "extremist" by researchers from the DWAS project. Bouchard et al. (2014) found that specific keywords can be associated with specific types of extremist websites, and that different websites can be differentiated by the context in which the keywords contained within them are used. For example, certain key words were used more frequently when examining a counterterrorist website in comparison to the examination of the key words found in white supremacist and jihadist websites.

Dynamic SNA and Terrorism

Because networks are dynamic, meaning people move in and out of a network over time, terrorist and dark networks are extremely difficult to track (Everton, 2012). However, several new methods employing the use of dynamic SNA are being used by researchers to track terrorist networks longitudinally, geospatially, and in real time. For example, software such as Sienna, a statistics-based network analysis program that uses dynamic network models, tracks actors in a network longitudinally and analyzes changes in the behavior of actors as they move in and out of networks (Ripley, Snijders, & Preciado Lopez, 2011). These longitudinal methods have been used to analyze the Salafi jihad and how this terrorist network evolved and changed over time (Everton, 2012; Xu, Hu, & Chen, 2009). Another longitudinal application of SNA in the analysis and identification of terrorist networks is social network change detection (SNCD), which can help identify events that may have significant impacts on the structure of terrorist networks over time, as well as changes in key players (Everton, 2012).

Analyzing data extracted from 113 Internet-based articles in 2002 related to al-Qaeda, Carly (2007) used dynamic network analysis to: (1) assess the nature of the network, (2) identify the network elite, (3) examine the sphere of influence that surrounded the network elite, and (4) assess the impact of various courses of action. Carly (2007) suggests that, because the structure and size of a network influences possible interventions and their effectiveness, identifying the typology of the network is essential. In this particular case of analyzing text and information on al-Qaeda, Carly found that the typology of the network was cellular, as opposed to other network typologies that include hierarchical, matrix, core–periphery, and scale-free network structures. In identifying al-Qaeda's network elite

and their potential weaknesses, Carly used dynamic network analysis and traditional SNA techniques of degree and betweenness centrality and cognitive demand to identify key players. To identify weaknesses, task exclusivity and knowledge exclusivity metrics were used to identify a node's unique niche and type of link, or relationship within the network (Carly, 2007). They found that, while Osama bin Laden was positioned at the top in each category, other important individuals emerged within different categories, providing different avenues for interdiction strategies based on the type of operation, such as disruption of the network or obtaining information (Carly, 2007).

Using SNCD, McCulloh and Carley (2011) analyzed a communications network operated by al-Qaeda to determine if they could identify changes in network structure when al-Qaeda members began to plan for the September 11 attacks on the World Trade Center. They found that, in the year 2000, there was a subtle change in the communication network that could have alerted authorities to possible terrorist activities and planning. (McCulloh & Carley, 2011). For example, they stated that "the breakdown of a team's effectiveness, the emergence of informal leaders, or the preparation of an attack by a clandestine network may all be associated with changes in the patterns of interactions between group members" (McCulloh & Carley, 2011, p. 1).

Future Directions

This chapter has provided a non-exhaustive review of studies that use network methods to illuminate terrorist networks. While this research allows us a view inside the structure of opaque networks, it comes with limitations. In order to move this area of study forward, future research addressing these limitations is necessary. Several of the studies are subject to boundary specification issues—how researchers define group membership. This concern is common to most studies of social networks, but particularly relevant to illegal networks since they seek to remain undetected. This could result in missing nodes or ties or errors in attribute specification of nodes and ties. Future research should pay more explicit attention to boundary specification issues, investigating structural differences between terrorist networks constructed using different node-inclusion characteristics. Using the research of Everton (2012) as a jumping off point, researchers should implement advanced SNA techniques such as exponential random graph models to examine the consequences of limiting types of actors and/or relationships in building terrorist and dark networks for study.

Another limitation involves the use of case studies common to SNA and terrorism research. It is important to note that, while case studies help us understand dark networks, research that compares several terrorist networks is necessary to advance the field. SNA case studies are bound to reflect the unique aspects of the specific terrorist group examined and are susceptible to external validity issues. By comparing several groups, we could address important questions about "vulnerability or similarity in network structure and organization" (Faust & Skvoretz, 2002, p. 294).

The third limitation common to SNA studies of terrorist networks is the absence of a comparison to legitimate networks. The structure of dark networks is hard to validate; therefore, validation should come from research on legitimate networks. Yet, studies comparing illegitimate networks to legitimate networks are noticeably absent from the literature. This is an important avenue for future research, and is necessary if we ever want to shed light on dark networks.

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Spatial and Temporal Analysis of Terrorism and Insurgency

Shane D. Johnson and Alex Braithwaite

Introduction

In this chapter, we provide an informed introduction to the wide array of academic studies aimed at detailing and accounting for spatial and temporal patterns in the incidence of terrorist and insurgent violence. The literature is vast, and so this is not intended to be an exhaustive review. Rather, it is designed to expose readers to the central concepts and to highlight a sample of key studies that have defined and directed the literature on the timing and location of terrorist and insurgent events and activities. In particular, we focus the majority of the chapter on those studies that have sought to combine spatial and temporal analyses, in what we refer to as *space–time analysis*.

Emergence of Space–Time Analysis of Violence across Multiple Fields

There is a long tradition of space–time analysis in the study of inter-state and intra-state wars, as well as that of criminal activities, and these have had a strong influence on the analysis of patterns of terrorism and insurgency. In this section, we begin by considering why we might expect distinct space–time patterns of conflict and consider empirical patterns. We then discuss patterns of criminal activity and, in the subsequent section, describe empirical research concerned with the space–time dynamics of terrorism and insurgency.

In the case of conflict, much of the research is motivated by an explicit discussion of military strategy and how this might produce particular patterns of activity in space and time. For example, modern geopolitical concerns about violent conflict draw upon the competing claims of Mahan (1890) and Mackinder (1904), who identified the control of strategic maritime routes or the territorial heartland, respectively, as key determinants of the prospects of a state's overseas expansions. Theories of the impact of geopolitics on the conduct of insurgent warfare, more specifically, have sought to specify the best ways for guerillas or rebels to take advantage of factors that vary in space and time, such as harsh terrain and unforgiving seasonal patterns in the weather and climate.

Take, for instance, the seminal contributions of insurgent leaders Ernesto "Che" Guevara and Mao Zedong. Guevara (1961) advised insurgents to identify and isolate conditions, such as difficult terrain, that enable them to evade state control. Mao (1967) detailed the expectation that guerilla warfare works best in larger countries in which rebels are able to base themselves in the periphery. Recent empirical research demonstrates the apparent significance of rough terrain as a predictor of the locations at which insurgent campaigns are most likely to be fought (Fearon & Laitin, 2003).

Within more mainstream academic circles, a derivative discussion developed in the post-1945 period. In particular, efforts across three areas of inquiry have focused upon analyses of interstate wars and reflect a tradition that continues to maintain a prominent role in political science and related disciplines. In the first, Kenneth Boulding's (1962) notion of the Loss of Strength Gradient (LSG) identified geographic constraints on the projection of power in conflict settings. Boulding astutely argued that states are not able to project their military might with equal measure at increasing distances from their home territories; rather, they experience a decay in their ability to project as they move more distant from home. This notion has been applied widely to the study of wars between states (see, e.g., Lemke, 1995) and civil wars and insurgencies within them (see, e.g., Buhaug, 2010). Almost without exception, empirical analyses confirm the Boulding hypothesis of LSG.

Second, a significant body of literature identifies the locations at which conflicts are fought and examines the clustering of these conflicts in space and time. This tradition draws upon the seminal contributions of Wright (1942) and Richardson (1960), both of whom argued that a country's geographical position and topology affects its conflict behaviors. Notably, they demonstrated that countries with more near neighbors are significantly more likely to experience new conflict onsets. This basic expectation—reiterated more recently by Bremer (1992), Vasquez (1995), and Starr and Thomas (2005), among others—has informed a subsequent body of work identifying spatial and space–time clusters of wars in line with predictions across most regions of the globe (Most & Starr, 1980; O'Loughlin & Anselin, 1991; Gleditsch, 2002; Braithwaite 2010a).

Third, a more recent trend has seen analysts pay close attention to the local-level determinants of where conflicts are fought.[1] This third tradition has sought to explore the empirical implications of both the aforementioned LSG and widely applied theories of greed and grievance (Fearon & Laitin 2003; Collier & Hoeffler 2004). Greed-and-grievance-based theories imply that economic profit and social and political injustices, respectively, motivate the onset of conflict between governments and non-state challengers. This literature demonstrates, for example, that, rather than being distributed across the entire territories of countries, battles in civil wars are typically located close to capital cities (Buhaug & Gates, 2002), in areas rich with natural resources (Buhaug & Rod, 2006) and economic wealth (Hegre, Ostby, & Raleigh, 2009), and in close proximity to conflict zones across international boundaries (Buhaug & Gleditsch, 2008; Braithwaite 2010b).

While the literatures on patterns of conflict and political violence have moved toward a richer and more fine-grained treatment of spatial scale, temporal patterns are typically examined on yearly time scales. In the case of crime, scholars have, for some time, examined patterns of offending at much finer spatial *and* temporal scales than has been the tradition in studies of conflict. For example, as early as 1833, Guerry (see also Quetelet, 1842) examined patterns of crime across administrative areas (known as departments) in France. In the last three decades in particular, criminologists have focused on patterns of crime at the micro-level of place. Research (see the following text) conducted at this level demonstrates

that events cluster in space, time, and space–time, and various theories have been proposed to explain such emergent patterns. In the case of urban crime, in contrast to wars, offenders typically commit offences alone or co-offend in small groups (for a recent discussion, see Andresen & Felson, 2010). That is, their activity is largely uncoordinated. Though not unchallenged, contemporary theory (e.g., Cornish & Clarke, 1986) suggests that when deciding when and where to offend, offenders engage in broadly rational decision-making. That is, while they will have imperfect knowledge of the effort, risks, and rewards associated with committing a particular offense (at a particular time and at a particular location), they are assumed to maximize the perceived utility of their activity based upon what they know. With this in mind, crime pattern theory (Brantingham & Brantingham, 1981) suggests that offenders typically commit crimes at those locations that are encapsulated by their aware-ness spaces of the city, and that these awareness spaces are formed as part of their legitimate routine activities.

According to these theories, an elevated risk of crime is to be expected at locations within the collective awareness spaces of offenders, and for which the ecology of the area provides a ready supply of potential crime targets in the absence of capable guardianship (Cohen & Felson, 1979). In support of this, research typically demonstrates that urban crimes (e.g., burglary or robbery) are more likely along roads that would be known to most people (e.g., Beavon et al., 1994; Johnson & Bowers, 2010; Davies & Johnson, 2015) or at or near to facilities that represent common routine activity nodes, such as bars (e.g., Groff & Lockwood, 2014; Bowers, 2014).

In addition to affecting where offenses take place, people's rhythms (Cohen & Felson, 1979) of activity can affect when they do so. That is, variation in people's activity patterns throughout the day can produce more or less ideal conditions for offenders to engage in crime, influencing directly the balance of suitable targets and capable guardians at a particular location. For example, during the day, capable guardianship may be high in city centers, but reduced at night. This can lead to the clustering of crime at particular times of the day (e.g., Ratcliffe, 2002). Seasonal variation in hours of daylight/darkness can also influence the ecology of an area, or the extent to which the conditions that are conducive to crime are met. This, along with other factors, can lead to monthly variation or the temporal clustering of crime (e.g., Tompson and Bowers, 2013; for a review, see Baumer & Wright, 1996).

In addition to clustering in space and in time, research (e.g., Townsley, Homel, & Chaseling, 2003; Johnson & Bowers, 2004; Johnson et al., 2007; Grubesic & Mack, 2008) demonstrates that crime clusters in both dimensions, such that when offences (e.g., bur-glary, vehicle crime, shootings, robbery) occur at one location, they are more likely to occur at that (e.g., Pease, 1998) or nearby locations in the near future. While this may be explained to some extent by systematic variation over time in the ecology of different parts of the city, research suggests that it is also explained by offenders adopting spatial decision-making strategies not unlike those observed in studies of animal foraging (for a recent review, see Johnson, 2014). Specifically, interviews with offenders (e.g., Summers et al., 2010), the analysis of crimes detected by the police (e.g., Bernasco, 2008; Bernasco, Johnson, & Ruiter, 2015; Johnson, Summers, & Pease, 2009), and computer simulations (e.g., Johnson, 2008; Pitcher & Johnson, 2011) suggest that offenders return to those locations where they have recently committed successful offenses. Explanations for this include the fact that offenders, as with other species, are subject to constraints. That is, they can only travel limited distances per unit of time, and returning to locations recently visited reduces uncer-tainty about the likely risks and rewards. However, returning to the same locations too often would leave little to target and would ultimately increase the risk of detection, and so

(as with other species) offenders appear to balance the risks and rewards of returning to previously targeted locations and move on after a burst of activity in an area.

In some ways, terrorists and insurgents engaged in intra-state conflict share goals in common with states involved in inter-state conflict. That is, they engage in activities intended to destabilize or overthrow a state actor, and the reason for the conflict may be motivated by ideological or political goals. Equally, however, while they may be large in number collectively, individual groups of insurgents may be small, and may have competing goals, meaning that they are subject to some of the same constraints faced by everyday criminals, most notably facing a stark asymmetry in resources compared with their adversaries. Consequently, it seems reasonable to assume that, as suggested by a number of scholars (e.g., Townsley et al., 2008; Johnson & Braithwaite, 2009), the spatial and temporal patterns of events observed during war, civil war, and urban crime might be anticipated for insurgent or terrorist activity.

Considering particular strategies, as terrorist or insurgent forces generally have significantly smaller numbers than the states they oppose, one strategy adopted by insurgents is one of exhaustion (see, e.g., Kydd & Walter, 2006; Lapan & Sandler, 1993). This involves the periodic targeting of small, winnable (state) resources. Collectively, such attacks are intended to exhaust an opponent's resources (money, lives) and/or morale. Successful exhaustion strategies involve striking a balance between engagement (fighting) and maneuvering (fleeing) when the benefits of the latter are outweighed by the effort and risks involved. For similar reasons to those discussed in the preceding text in relation to offender spatial decision-making, such strategies are likely to lead to insurgent attacks clustering in space and time. Targeting the same locations swiftly can also draw attention to the activity of insurgents and their intentions, which may help them to gain support from the general population (see, especially, Thornton, 1964), or assist in recruitment.

On a different note, Bohorquez et al. (2009) highlight the fact that the composition of insurgent groups is likely to be dynamic, with groups fragmenting or merging over time. This directly affects their capacity to act, and is hence likely to lead to the clustering of insurgent attacks in time at particular locations (see also, Bohorquez et al., 2009; Clauset & Gleditsch, 2012). On a related note, N. F. Johnson et al. (2011) consider how insurgents adapt to counterinsurgent (COIN) strategy and vice versa, and how this can influence the timing of attacks. Other explanations for why insurgent activity might be expected to cluster in space and time are reviewed in the works of Johnson and Braithwaite (2009) and Behlendorf, LaFree, and Legault (2012).

Evolution of Space–Time Analysis of Terrorism and Insurgency

Given the discussion in the preceding text, it is perhaps unsurprising that the traditions adopted in the study of war, civil war, and crime have had a strong bearing upon the development of the space–time analysis of terrorism and insurgency. In this section, we have opted to narrow our review of a very large extant literature by focusing upon the move, in recent years, toward greater degrees of disaggregation in the scale of data employed in space–time analyses.

Over the past three to four decades, there has been a rich body of work that has applied econometric time series analysis to explain changes in levels of terrorist attacks and fatalities at the global level of analysis (cf., Enders & Sandler, 1993; 2011). A much smaller literature, by comparison, has focused attention upon the role of location and distance in driving the

contagion of terrorism between Latin America and Europe (Midlarsky, Crenshaw, & Yoshida, 1980; Heyman & Mickolus, 1980). The study by Midlarsky and co-authors plays an especially influential role in the literature, because it provides a theoretical baseline for explaining the global spatial and temporal distribution of terrorist events. They suggest that the distribution can follow one of four possible patterns: randomness, heterogeneity (some countries are simply more risky than others), reinforcement (an attack in a country increases the risk of further attack in that country), and contagion (attacks in one country increase the risk to that country and those nearby). Quite independently, similar patterns have been considered in studies of urban crime at the micro level of place (e.g., Pease, 1998; and, for a recent discussion and demonstration, see Johnson, 2008), and it is reasonable to expect that they might also be observed at other geographical scales (e.g., neighborhoods, parts of a city).

With the arrival of large, cross-national databases on terrorism, including the International Terrorism: Attributes of Terrorist Events (ITERATE) and Global Terrorism Database (GTD), the literature has reoriented its focus toward monadic (country-level) studies of the determinants of terrorist violence. Some of this work indirectly (and inadvertently) identifies space–time patterns and correlates of terrorism. As an example, these studies demonstrate that both democracies (Li, 2005) and weak or failing states (Piazza, 2008) experience disproportionately high levels of terrorism. We know from elsewhere that both democracy and state failure cluster over space and time. Thus, we could speculate on the basis of these studies that terrorism likely also clusters in space. Braithwaite and Li (2007) confirmed this when they identified hotspots of transnational terrorism and demonstrated that these patterns helped to explain future patterns of terrorist violence.

The evolution of sophistication in the space–time analyses of terrorism and insurgency has accelerated rapidly in the past decade or so. The remainder of our chapter thus focuses upon the main trends in this area that reflect the new state-of-the-art. The primary focus of this literature is now on the identification of sub-national patterns of clustering of incidents, as well as their spread between locations. This maturation is supported, in no small part, by the wide-scale adoption of techniques developed outside of political science and criminology, including those from the geographical, physical, statistical, and mathematical sciences. The primary contribution of these fields has come in the form of innovations with respect to the manipulation and analysis of rich sources of data.

The ready availability of event-level terrorism and insurgency data has encouraged the analysis of single-country datasets. The studies exploiting these rich new sources of data vary on three dimensions. First, they address patterns in different countries and conflict zones. There are many studies on Iraq, Afghanistan, Pakistan, the North Caucasus, Spain, the United Kingdom, El Salvador, and elsewhere. Second, they vary with respect to the way in which they aggregate point-level data for the purpose of analysis. Iraq, for instance, has attracted considerable inquiry using approaches that consider the space–time distribution of events relative to each other but not to the (character of the) geographic location at which they occur, and those that do both. And, third, some studies use statistical methods to identify patterns or correlations in the data analyzed, while others employ methods that also enable the prediction of when and/or where insurgent attacks are next most likely.

Townsley, Johnson, and Ratcliffe (2008) use the Knox (1964) test, developed in the field of epidemiology to detect disease contagion, to examine space–time patterns of improvised explosive device (IED) attacks in Iraq. Using significant activity reports (SIGACTS) data, collected by the military, they show that IED attacks are more likely at locations near where attacks have recently occurred, but do not consider if or how such places differ.

The approach is developed in sequential fashion in Johnson and Braithwaite (2009) and Braithwaite and Johnson (2012). In each of these studies, the spatial proximity between observations is again measured in relative terms, being defined uniquely for each event observation, but the authors explore not only how the timing and location of insurgent activity influences future attacks, but also how the space–time distribution of counterinsurgent (COIN) action affects patterns of insurgency, and vice versa.

In a similar fashion, using data from GTD, a number of studies have analyzed the so-called "micro-cycles" of violence with a view to demonstrating the role played by individual events in generating localized bursts of activity in the same and neighboring locations. This differs from the Knox approach described in the preceding text, which is used to examine the extent to which "pairs" of events (rather than bursts of a series of events) are observed to occur close to each other in space and time. The literature reflects evidence of burstiness or microcycles of violence in the cases of ETA violence in Spain (LaFree, Dugan, Xie, & Singh, 2011; Behlendorf, LaFree, & Legault, 2012), FMLN violence in El Salvador (Behlendorf, LaFree, & Legault, 2012), and the insurgency in Iraq (Johnson & Braithwaite, 2009).

Most recently, Braithwaite and Johnson (2015) imposed a fixed spatial structure to the city of Baghdad to examine patterns at a finer spatial scale (1 km grid cells) than the area-level studies discussed in the preceding text. Their findings demonstrate that (at least) three factors explain the evolution of insurgent violence in Iraq in 2005. As with previous studies, all other things being equal, the risk of attack diffused in space and time, exhibiting a contagious quality.[2] COIN activity too was found to influence the timing and location of attacks, with cordon/search operations being associated with an increased risk of attack at a location. And, finally, there was clear evidence of spatial heterogeneity, with some areas of the city consistently being at a greater risk of attack than others. In this case, the risk of attack was positively associated with the presence of roads (particularly major roads) and the ambient population, but negatively associated with the presence of the airport garrison.

Using a similar econometric approach (Granger causality), and georeferenced data for the period 2004 to 2009, Linke, Witmer, and O'Loughlin (2012) provide evidence that a tit-for-tat process explains the distribution of conflict in Iraq more broadly. That is, increased activity by COIN forces at a location leads to an increase in insurgent activity at that location and those adjacent in the near future, and vice versa. Furthermore, they show that context matters. That is, they find that it is not just the case that some locations are more prone to attacks, but also that the intensity of strategic interaction between insurgents and pro-government forces varies across different types of neighborhoods. For example, in more economically deprived neighborhoods, insurgents were found to react more strongly to COIN activity, whereas in wealthier areas, COIN forces were found to react more strongly to insurgent attacks. They conclude that the data display strong temporal dependence in levels of violence at the same location, but significant variation in the impact of distance across the various neighborhoods for which data were analyzed.

We have also seen a considerable amount of work carried out to account for patterns of violence observed during the long war in Afghanistan. These analyses provide evidence of clear patterns of the spread of conflict away from Pashtun heartlands by 2008 (O'Loughlin, Witmer, Linke, & Thorwardson, 2010) and of spillover into neighboring Pakistan via unmanned aerial vehicles (UAVs) in pursuit of fleeing insurgents (O'Loughlin, Witmer, & Linke, 2010).

Insurgent–Government strategic interaction also lies at the heart of work on the North Caucasus. Zhukov (2012) demonstrates that insurgent violence diffuses between villages (at which level the data are aggregated) via road networks. In part, and similar to the work

discussed in the preceding text, these patterns are shown to be a consequence of the government adoption of COIN strategies (Toft & Zhukov, 2012), such that punishment-based strategies, involving the direct application of kinetic force against insurgents, are shown to be somewhat counterproductive—increasing rather than decreasing subsequent levels of insurgent violence—while denial-based strategies, involving attempts to undermine the resource base of the insurgents, are shown to be considerably less inflammatory (see also, Braithwaite & Johnson, 2012).

Taking advantage of the temporal precision of available data, a number of studies (e.g., Lewis et al., 2012) have recently employed self-exciting point process (SePP) models to examine the timing of attacks. Such models are used to estimate the extent to which the timing of attacks can be explained by an underlying baseline rate (assumed to be a Poisson process) and an "excitation" mechanism whereby an attack influences the timing and intensity of subsequent ones. White et al. (2013) show that the insurgencies in Indonesia, the Philippines, and Thailand can each be explained by these two processes, but that, while the conflicts are qualitatively similar (in this manner), the risk of attacks triggered by an earlier event typically persisted for a longer period (about 1 month) in the Philippines and Thailand, than was the case in Indonesia. The estimation of the baseline risk, and the period over which the increase in risk due to excitation persists, provides the opportunity to not only test theoretical models but also to generate predictions about when attacks are next most likely, and to evaluate the impact of COIN interventions. Most of the published research that has used SePP models to examine insurgent activity has considered patterns at the country level. Thus, while the models employed may offer considerable precision in terms of predicting when attacks may be next most likely, they offer little or no indication of where they might take place.

Researchers have developed a variety of alternative approaches to handling rich disaggregated spatial data in order to deal with problems associated with the loss of information resulting from the spatial aggregation of data associated with country-level analyses. Spatial point process modeling using stochastic partial differential equations (SPDE) has provided accurate forecasts of the location and timing of conflict events in Afghanistan (Zammit-Mangion, Dewar, Kadirkamanathan, & Sanguinetti, 2012). Their analyses, carried out on weekly counts at both national and regional levels, demonstrate that spatiotemporal dynamics can be accurately forecast using the SPDE methodology. This is possible because the Afghan War Diary data display noteworthy spatial and temporal dependencies, as well as clear signs of diffusion and advection.

Johnson et al. (2011) use an alternative approach (see also Johnson et al., 2013). In particular, they model the waiting time distribution between events (in this case, insurgent attacks that produce at least one coalition fatality) using a model that includes terms for the waiting time between the first two attacks of a particular conflict (that produced coalition fatalities) and an escalation parameter. The latter is used to estimate the rate at which the waiting time between attacks changes over time (it is expected to decrease in an escalating insurgency). Using coalition fatality data for the insurgencies of Afghanistan and Iraq, they estimate parameters for each of the provinces in the two countries. Their findings reveal a surprisingly robust linear relationship between the two parameters, a regularity which suggests that the timing of attacks is predictable for these two insurgencies, and new ones for which at least two attacks have taken place (to allow the waiting time between the first two attacks to be calculated).

Recent work (Baudains et al., in submission) using data regarding the Naxalite insurgency in Andhra Pradesh (India) has employed a spatial variant of the SePP approach discussed

in the preceding text to enable both the timing and location of attacks to be modeled. In this case, the finest spatial scale at which data were available was the district level. Districts are quite large (around 6,000–19,000 km^2 in Andhra Pradesh), but the analytic approach that was employed allowed the authors to show that space–time patterns of Naxal attacks cluster in space and time such that attacks are more likely in the same and neighboring districts following an attack, and to estimate when the next attack in a particular district is most likely to occur. By employing a multivariate framework, Baudains et al. were also able to show that, as with the earlier studies discussed in the preceding text, a tit-for-tat process explains some of the dynamics of the conflict. However, this appeared to be limited to the district within which events occur—there was no apparent spillover to neighboring districts associated with this process.

Suggestions for Future Developments

We anticipate that a number of the trends highlighted in this brief review will be continued and will form the heart of future innovations. In particular, we expect studies to more precisely examine the spatial dimension, exploring those environmental factors that might condition the likelihood of future events occurring close to recent attacks (e.g., Braithwaite & Johnson, 2015; Linke et al., 2012). For example, the elevation in risk discussed in the preceding text may be more likely for terrains that are conducive to attacks, or in areas that are rich in resources where strategies of outbidding—where insurgent groups compete for resources or recruits—may be expected to play out. Since different types of attacks may have different precipitators, or situational determinants, further disaggregation may involve the analysis of different types of insurgent (e.g., IED attacks or exchange of fire) or COIN activities (see Johnson & Braithwaite, 2009; Braithwaite & Johnson, 2012), and how the timing and location of different kinds of events might vary as a function of environmental characteristics.

For example, as discussed in the preceding text, Linke et al. (2012) show in their study that the reciprocity of violence between COIN and insurgent forces is conditioned on the type of neighborhood in which events take place. Their investigation was motivated by theories regarding the impact of violence on the communities in which incidents occur. In particular, indiscriminate violence by COIN forces may encourage the local population to sympathize with or support insurgent forces (see also Braithwaite & Johnson, 2012), either by withholding information from COIN forces, by providing practical assistance, or by joining the insurgency. Active engagement in an insurgency, for example, can be a source of income, and so may be attractive to some, particularly where alternative means of employment are limited (Bueno de Mesquita, 2005). Other possibilities exist (for a discussion, see Linke et al., 2012), and exploring these using data for different conflicts would be a worthwhile endeavor.

A further analytic strategy that would be of clear utility would involve the disaggregation of incidents to enable researchers to look at group-level characteristics and activities. That is, instead of treating conflicts involving insurgents as a two-party phenomenon, such analysis would provide valuable insight into the complex interactions that occur between insurgent groups that may be competing for territory, public support, or other resources.

These and other types of analysis may require the development of new techniques of analysis or the application of those not employed hitherto. This may be particularly the case given the increasing availability of large sets of empirical data that might provide novel insight, but that may be computationally expensive to analyze using existing methods.

We also expect to see greater use of tools from complexity science, such as agent-based modeling. Briefly, agent-based modeling (e.g., Gilbert & Troitzsch, 2005) involves the simulation of phenomena of interest using autonomous software agents. Classes of agents (e.g., insurgents, civilians, and COIN forces) are bestowed with characteristics (e.g., age, ethnicity, place, or residents) and behavioral rules—derived from theory—that influence their activity. They interact with each other and their (simulated) environment—which can be as detailed as data allow, or more abstract in nature—to generate patterns of activity (e.g., IED attacks). The basic idea is that, rather than requiring complicated explanations, macro-level phenomenon, such as the space–time clustering of IED attacks, can emerge from simple local-level interactions between agents. When guided by theory, such modeling has the potential to inform our understanding of conflict (for an example of a numerical simulation, see Bohorquez et al., 2009) and the potential impacts of different COIN strategies on it.

As an example, Weidmann and Salehyan (2013) employed a computational model to explore patterns of violence in Baghdad across multiple inter-ethnic relations. In their model, they permit individual agents to respond to co-ethnics by choosing either to engage in violence or to move to a new neighborhood. By doing so, they are able to offer an explanation for the massive levels of internal displacement observed in Iraq's capital city during the 2003–2008 period. They are also able to offer some expectations regarding the likely impact of (simulated) policy changes upon observed levels of violence and displacement.

The review provided in the preceding text indicates that considerable attention has been devoted to the study of space–time patterns of terrorist and insurgent activity, but it should be evident that there is much more to do. In this chapter, our aim was to provide an overview of the existing state-of-the-art, and to highlight some future possible directions that research might take.

Notes

1 Much of the progress made in this third area of inquiry is designed to overcome what Agnew (1994) identified as "the territorial trap"—an undue focus of attention upon the nation-state as the unit of analysis for research into international conflict events.
2 In this context, "contagious" simply means that the spatial and temporal patterning of events resembles that of a contagious disease. It is not intended to suggest that a biological agent is at play.

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Applying Multilevel Models to Terrorism Research

Brian D. Johnson

In recent decades, empirical research on global terrorism has emerged at the vanguard of criminological discourse. Increased media coverage, heightened public interest, expansion of government funding, and burgeoning academic interest have all contributed to a surge in research across a wide variety of topics. From airline hijackings to counterterrorism strategies and from the punishment of terrorist defendants to global patterns of terrorist attacks, criminological research on this important topic has never been more prolific (see, e.g., LaFree et al., 2009, 2010; Damphousse & Smith, 2004; Dugan et al., 2005; Chermak & Gruenewald, 2006; Johnson, 2012). As one commentator noted, "As a topic of debate, the purpose and direction of terrorism research has taken on a sense of urgency unseen in the last 30 years" (Ilardi, 2004:214).

At the same time, the analytical sophistication of research on terrorism has developed rapidly within the field of criminology. A broad variety of highly refined methodological and statistical approaches have been applied to the study of terrorism, ranging from proportional hazard models (e.g., Dugan et al., 2005) to group-based trajectory models (e.g., LaFree et al., 2009), and from interrupted time-series models (e.g., King & Sutton, 2013) to negative binomial regression approaches (e.g., Mullins & Young, 2010). Somewhat unexpectedly, though, very few attempts have been made to apply multilevel models to terrorism research. This is surprising, given the proliferation of these analytical techniques across other areas of criminological inquiry (Johnson, 2010), along with the fact that terrorism research involves numerous research questions that have clear multilevel applications— from public opinion about risk of terrorist victimization to international comparisons of the lethality of terrorist attacks, multilevel models hold considerable promise to advance our understanding of a wide variety of issues in contemporary terrorism research.

This chapter provides an introductory overview of the application of multilevel models in the study of terrorism. It begins with a basic conceptual, theoretical, and statistical introduction to multilevel analysis, explaining what it is and how it can be useful. It then reviews the small number of studies that have applied multilevel models to the study of terrorism, followed by a discussion of additional avenues through which they might be fruitfully applied to various issues in future work. Finally, the chapter concludes with a brief discussion

of future directions and potential limitations that scholars should be cognizant of when considering whether or not multilevel models should be applied to specific research questions in terrorism research.

A Brief Overview of Multilevel Models

Multilevel models, or hierarchical linear models (HLM) as they are sometimes labeled,[1] are regression-based statistical models that are designed to help researchers capture the simultaneous influences of multiple levels of influence across more than one unit of analysis. They are necessitated by the fact that social relationships often involve multiple levels of analysis, where primary units are nested within secondary units, such as individuals who are clustered within social, political, or organizational groupings. Because global terrorism is inherently a multinational enterprise, terrorist attacks are routinely nested within national contexts that vary along a number of important dimensions (LaFree et al., 2010). The basic logic can be applied to any social relationships in which units of interest can be conceptualized as belonging to a larger shared environment. For instance, individual terrorists may be nested within terrorist groups or networks, which may be simultaneously nested with additional levels of analysis, such as communities, regions, or countries. These manifold hierarchies can coexist concurrently, and multilevel models allow the researcher to tap into their joint and shared effects for a variety of potential outcomes of interest.

Terrorist events may also be nested within temporal contexts, such as when repeated measures exist for individuals or when observations are nested within time periods. Research examining repeated attacks within countries, for instance, might capitalize on the fact that incidents are nested within days, months, or years. In this context, multilevel models allow the researcher to incorporate time-varying predictors in addition to static characteristics. Regardless of the specific types of data nesting, or the hierarchical complexity involved, the key observation is that research on terrorism often involves data that span more than one unit of analysis. In fact, given the complexity of political violence, it is difficult to identify situations where multilevel influences are not potentially relevant. Even in the case of "lone-wolf" attacks (Spaaij, 2012), there are likely to be hierarchical influences such as broader national politics or cultural factors that affect individual behavior. When these types of relationships are present, multilevel models offer a useful but underutilized tool for capturing the hierarchical influences that can affect sundry outcomes in the study of terrorism. Given the theoretical salience of social, political, organizational, and temporal contexts in contemporary terrorism scholarship, multilevel models hold considerable promise to advance future empirical work in this area—they offer a number of conceptual, theoretical, and statistical advantages that can improve analyses based on traditional single-level regression-based models.

Conceptual, Theoretical, and Statistical Rationales for Multilevel Models

Conceptually, the need for multilevel models is driven by the fact that lower-level units of analysis are often "nested" within one or more higher-order ecological contexts. Research questions that involve nested data hierarchies where micro-level behavioral outcomes are subject to influence from broader macro-level influences are prime candidates for multilevel research. Multilevel influences can occur in a number of distinct ways. They can derive

from the aggregate properties of individuals, such as the proportion that is male in a terrorist group, or they can attach to relational measures among groups, such as the density of a terrorist network (see Luke, 2004). They can also reflect the broader structural characteristics of higher-order units, such as the historical lethality of a terrorist organization, or the socioeconomic conditions or degree of democratization in a nation state. Moreover, macro-level characteristics can affect micro-level outcomes in distinct ways. First, they can exert compositional effects in which group differences result from the variable makeup of different clusters. In this case, between-group differences may result from the fact that different groups are simply made up of different individuals. Second, they can also exert contextual effects, which derive from "emergent properties," or group-level influences that exist above and beyond any compositional differences of the collective. Multilevel models allow researchers to capture and distinguish among these types of ecological influences.

The utility of hierarchical statistical models is further rooted in the theoretical strengths of multilevel analysis. Multilevel models are extensions of traditional regression models that explicitly capture the hierarchical nature of social relationships. Analytical frameworks that allow for multiple types of influence provide a more complete theoretical picture of the full range of factors that shape various outcomes in terrorism research, and they improve our ability to explain individual behavior and the broader social contexts that condition it. Figure 16.1 provides a theoretical schematic of some of the potential ways in which cases can be nested in data hierarchies in terrorism research. As suggested, repeated measures can occur when multiple attacks are observed for an individual terrorist or terrorist organization over time. Individual terrorists themselves may also belong to diverse networks and organizations, and different organizations might be nested within larger social movements (e.g., radical Muslim extremism). In such an example, covariates measured at the lowest level of analysis would include repeated measures within an individual terrorist, whereas those at the highest level of analysis would capture characteristics of organizations or social movements. Studies that focus only on individuals or only on broader aggregate covariates implicitly ignore the hierarchical structure of these relationships, and this is likely to introduce large-scale omitted-variable bias of a theoretical nature. That is, by only focusing on
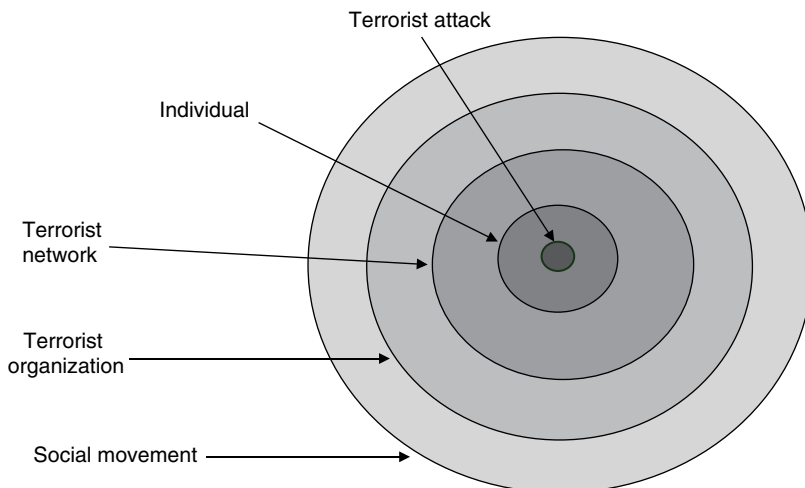
Figure 16.1   The Nested Nature of Terrorism

individual characteristics, the influences of terrorist networks and organizations are ignored; by focusing only on macro-level variation, the theoretical import of individual differences is excised.

A theoretical strength of multilevel modeling, then, is that it allows researchers to investigate and test hypotheses about relationships that occur across levels of analysis. Micro-level influences involving such things as why different individuals join terrorist groups or how and when they desist from political violence (LaFree & Miller, 2008; Miller, 2012) are likely to vary across both terrorist groups and broader ecological environments; individual psychological or cultural factors may be more or less salient in different aggregate social and political contexts. Developing and testing theoretical models that better account for the ways that micro-level effects vary across macro-level contexts offers an important opportunity to advance current knowledge about the causes and consequences of terrorist behavior. By focusing only on a single level of analysis, we limit the conceptualization of important theoretical predictors and place artificial constraints on the influences that are considered.

Overreliance on single levels of analysis may also introduce inferential problems. Criminologists are well aware of the ecological fallacies that can occur when individual relationships are inferred from aggregate data (e.g., Robinson, 1950). Similar inferential problems also characterize generalizations about aggregate relationships based on individual-level data. Akyuz and Armstrong (2011), for instance, find evidence that poverty and residential mobility are related to terrorist attacks in Turkey, but this cannot be interpreted as meaning that poorer people or people who move more frequently are more likely to engage in political violence. To address that question, data on individual characteristics would need to be married to the aggregate data. Similarly, Smith and Damphousse (1996) show that criminal offenders who are labeled terrorists in US District Courts receive longer sentences, but this should not be interpreted to mean that average sentences are necessarily longer for terrorism cases compared with other federal crimes. Because associations between two variables at the individual level can differ from analogous associations at the contextual level, relationships cannot be reliably inferred across levels of analysis. Multilevel models solve this problem by allowing researchers to simultaneously examine relationships across multiple levels of analysis.

Finally, there are also convincing statistical reasons for employing multilevel models in terrorism research.[2] Multilevel models improve parameter estimates, correct standard errors, and properly adjust statistical significance tests. Relying on traditional regression models in the face of multilevel data presents several problems. Figure 16.2 presents a second example of hierarchical data where individual terrorists are nested within terrorist organizations and countries of origin. Terrorists who are nested within the same terrorist organization will tend to share certain similarities. The result is statistical dependencies among clustered observations that negatively impact estimates derived from ordinary regression models. Statistically speaking, this means that the residual errors in the model will be correlated, violating one of the core assumptions of ordinary least squares (OLS) regression. The result is that standard errors will be systematically underestimated, producing overly liberal statistical significance tests, and creating a greater chance that the null hypothesis will be falsely rejected even when it is true in the population. Multilevel models provide a convenient way to account for the dependencies that occur among clusters of hierarchically organized data. They also improve model estimates by utilizing a Bayesian estimation approach that weights group means by their respective reliabilities. In essence, estimates for specific groups are based not only on their own within-group data, but also on data from other similar groups. This can be particularly advantageous when analyzing data
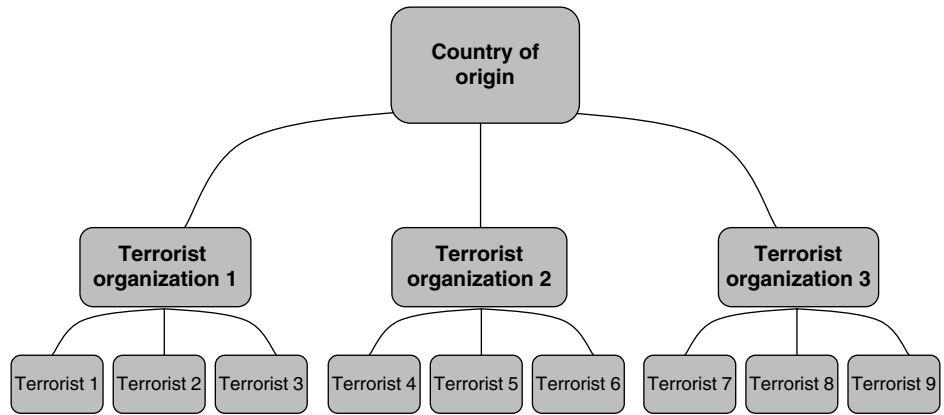
Figure 16.2   Heuristic Example of the Nesting of Terrorists in Organizations and Countries

that are unbalanced or have high rates of missingness, which is often the case when violence is investigated over long periods of time (LaFree & Tseloni, 2006). The end result is that group-level estimates from multilevel models will be optimally weighted to capitalize on the available information from both within-group and between-group variations that occur in the data.

Statistical significance tests derived from ordinary regression models will also be based on erroneous degrees of freedom when aggregate predictors are included with individual predictors in ordinary regression models. Standard OLS regression models do not account for the fact that different sample sizes occur at different levels of analysis. For instance, a number of contemporary studies utilize data from the Global Terrorism Database (GTD), which includes open-source data on domestic and transnational terrorist attacks in dozens of countries over several decades. LaFree et al. (2009), for example, note that 16,916 terrorist attacks were committed by 53 different foreign terrorist groups, according to the GTD data. If only characteristics of the attacks themselves are examined in an ordinary regression model, then the individual-level sample size is just $N = 16,916$. However, if researchers want to also examine group characteristics, then they need to account for the fact that there are two different sample sizes (i.e., $N_2 = 16,916$ attacks; $N_2 = 53$ terrorist groups). If group-level factors are included in OLS regression models, the default will be to treat them as though there is information from 16,916 total observations, rather than only 53 groups. This will artificially inflate the statistical power of the model, making it overly likely to detect significant group-level influences. The multilevel model addresses this issue by formally adjusting the degrees of freedom in the statistical significance tests to reflect the smaller group-level sample size.

Lastly, multilevel models also provide a convenient approach for examining variation that is associated with different units of analysis, and they allow the researcher to explicitly model heterogeneity that can occur in regression effects. The multilevel model provides for the calculation and examination of intra-class correlations, which identify the proportion of the total variation in the outcome that is attributable to different levels of analysis. This makes it possible to identify, for instance, the amount of variation in terrorist attacks that is associated with individual terrorist characteristics versus group or county-level predictors. Moreover, whereas ordinary regression models constrain individual effects to be constant across aggregate units of analysis, multilevel models allow the researcher to hypothesize,

model, and test for variation in the effects of individual predictors across different ecological units of analysis. As a whole, then, multilevel models can provide several analytical and statistical advantages when a researcher is faced with research questions that involve more than one level of analysis. Given the fact that most research questions in contemporary terrorism studies involve individuals that belong to terrorist groups, or terrorist groups that are nested with communities, regions, or countries, it is surprising that multilevel models have not been more widely adopted in contemporary terrorism research.

Multilevel Models in Terrorism Research

Table 16.1 summarizes the breadth of empirical approaches that have been applied in prior terrorism research.[3] Scholars have employed Cox proportional hazard models to study counterterrorism strategies and airline hijackings (Dugan et al., 2005; LaFree et al., 2009); they have used interrupted time-series designs to examine casualties of terrorist attacks (Enders & Sandler, 2000; King & Sutton, 2013); and they have used negative binomial regression models to predict the number of terrorist attacks and fatalities across time and space (Burgoon, 2006; Krueger & Laitin, 2008; Li & Schaub, 2004). Related work has analyzed structural equation models to investigate the determinants of sentence lengths for convicted terrorist offenders (Smith & Damphousse, 1996); utilized analysis of variance tests to investigate psychological differences in perceived risk of terrorism (Lerner et al., 2003); or exploited group-based trajectory models to quantify attack patterns across terrorist groups and/or countries of interest (LaFree et al., 2009, 2010). Collectively, these studies represent an impressive array of highly refined methodological and statistical approaches in contemporary research on terrorism.

Relatively few extant studies, though, have capitalized on the strengths of multilevel modeling in the study of terrorism. Some cross-national research has used multilevel models to study violent crime more generally. LaFree and Tseloni (2006), for instance, analyzed data from 44 countries over a 50-year period (from 1950 to 2000) and found that violent crime rates were highest in transitional democracies, though homicides increased gradually for full democracies during the second half of the century. Their research examined homicide rates with two distinct units of analysis captured by time (measured in years) and place (measured by countries). As they note, one of the advantages of multilevel models as opposed to more common alternatives, such as fixed-effect panel models, is that the multilevel model is more efficient when faced with unbalanced designs or incomplete data (Snijders & Bosker, 1999). These authors, however, do not specifically investigate violence tied to terrorism.

The present review identified only a few examples where multilevel analysis has been explicitly applied to terrorism research. Johnson (2012) utilized multilevel models to study federal punishments for convicted terrorists. This research analyzed data collected in the American Terrorism Study (Smith et al., 2002) and used multilevel models to account for the nesting of terrorist defendants, both within terrorist organizations and within the federal district courts where they were punished. Findings from this work suggested that part of the variation in punishment outcomes was attributable to group differences in membership in different terrorist organizations as well as characteristics of the federal court where the defendant was tried. For example, individuals belonging to left-wing terrorist organizations were substantially more likely to have their cases dismissed compared with those belonging to more conservative right-wing groups, and these effects emerged net of other individual-level control variables.

Table 16.1 Common Methodological Approaches Applied in Twenty-first-century Terrorism Research

Authors (Year)	Data	Analytical Approach	Multilevel Analysis	Unit of Analysis
Enders & Sandler (2000)	International Terrorism: Attributes of Terrorist Events (ITERATE) data	Interrupted time series analyses comparing pre-Cold War and post-Cold War periods	No	Incident
Smith et al. (2002)	American Terrorism Study (ATS)	Frequencies and cross-tabulations	No	Person/case
Abadie & Gardeazabal (2003)	Spanish Ministry of Interior data	Impulse response functions for Basque region and a matched 'synthetic' region	No	Region
Lerner et al. (2003)	973 people surveyed on September 20 and November 10, 2001	Analysis of variance (ANOVA)	No	Person
Li & Schaub (2004)	ITERATE data	Negative binomial regression; pooled time-series analysis	No	Country–years
Dugan, LaFree, & Piquero (2005)	Federal Aviation Administration (FAA) data, RAND data; GTD data	Cox proportional hazard modeling; logistic regression	No	Incident
Burgoon (2006)	ITERATE data, National Memorial Institute for the Prevention of Terrorism (MIPT-RAND) data	Negative binomial regression of the number of terrorist attacks	No	Country
Piazza (2006)	State Department data, 1986–2002	Ordinary least squares (OLS) regression	No	Country
Krueger & Laitin (2008)	State Department data, 1997–2002; suicide data since 1980	Negative binomial regressions of the number of terrorist events	No	Country
LaFree, Dugan, & Korte (2009)	GTD data	Cox proportional hazard models of number of terrorist attacks	No	Counterterrorist strategy
LaFree, Yang, & Crenshaw (2009)	GTD data	Group-based trajectory modeling of number of terrorist attacks	No	Terrorist group
LaFree, Morris, & Dugan (2010)	GTD data, 1970–2006; RAND-MIPT database	Group-based trajectory modeling, zero-inflated Poisson regression of the number of terrorist attacks	No	Incidents; country-level trajectories
Mullins & Young (2010)	GTD data	Zero-inflated negative binomial regression of the number of terrorist attacks	No	Country–year
Akyuz & Armstrong (2011)	Data from Institute for the Study of Violent Groups	Zero-inflated negative binomial regression of the number of terrorist attacks	No	Province

Study	Data	Model	Multilevel	Unit of analysis
Piazza (2011)	Minorities at Risk data	Negative binomial regressions of the number of terrorist attacks	No	Country
Stevens et al. (2011)	Pooled 2007 and 2010 phone surveys with New South Wales adults	Logistic regression of perceived likelihood of terrorism	No	Person
Johnson (2012)	ATS	Cross-classified multilevel models	Yes	Person/case
King & Sutton (2013)	UCR and GTD data	Time-series analysis of hate crimes	No	Incident
Legewie (2013)	European Social Survey	Ordinary and multilevel regression models of attitudes toward immigrants	Yes	Person
Freilich et al. (2015)	Data from US Extremist Crime Database and FBI's SHR, 1990–2012	Logistic regression models of the probability of residing in a US county	No	Incident
LaFree & Bersani (2014)	GTD data, 1990–2011	Hierarchical Poisson-based regression models of the frequency of terrorist attacks in a year	Yes	County–year and county
Bakke, O'Loughlin, & Ward, 2009	Survey data for five North Caucasus republics; census data for 82 communities	Multilevel ordered probit models of the willingness to forgive terrorist attacks	Yes	Person and communities
Fahey & LaFree (2015)	GTD data	Fixed-effects negative binomial regression of the number of attacks and fatalities	No	County–years
Amirault & Bouchard (2015)	Open-source data on Front de Libération du Québec	Ordinary least squares regression models of sentence lengths	No	Person/case

Another very distinct application of multilevel analysis in the study of terrorism was conducted by Legewie (2013) using data from the European Social Survey. This study examined the effect of a major terrorist attack in Bali on respondent attitudes toward foreign immigrants. Legewie hypothesized that the attack would have differential effects at different time points, across different geographical subregions, and in different European countries. He estimated multilevel models that allowed for the influence of the attack to vary across these social contexts, and was able to demonstrate that attitudes toward immigrants were uniquely affected by the attack in different social contexts. In his effort to explain these variations, the author also demonstrated that the effect of the terrorist attack depended in part on the proportion of immigrants that resided in the region.

In one of the most recent applications of multilevel modeling to terrorism research, LaFree and Bersani (2014) analyzed data from GTD, focusing on instances of domestic terrorism within the United States. The authors employed hierarchical Poisson-based regression models to examine the frequency of terrorist attacks over time and across space, with terrorist attacks being nested within US counties. Their findings suggest that traditional indicators of social disorganization, such as language diversity, population heterogeneity, and residential mobility, were associated with terrorist attacks in a given year, although concentrated disadvantage was inversely associated with terrorist attacks.

Finally, Bakke et al. (2009) conducted a multilevel analysis of reconciliation, examining willingness to forgive among individuals who had violence perpetrated against them by members of other ethnic groups. They used data from a large representative survey conducted in five North Caucasus republics in 2005 and matched it with aggregate Russian census data for 82 community contexts ranging in size from large cities to small rural settlements. They included unique contextual measures such as proximity to violent events in the region, noting that "It is now widely acknowledged" that "'places matter'; that is, that individual-level predictors do not fully account for variation in political and social behavior between communities," and that a "multilevel approach allows us to measure the social–psychological effects on the individual" as well as "the geographic effects of community exposure to violence" (Bakke et al., 2009:1017). Their analysis found limited evidence that ethnic hostility predicted forgiveness. Instead, a number of other factors, such as personal exposure to violence and terrorism, were related to willingness to engage in post-conflict reconciliation.

Outside of these few exceptions, empirical research applying multilevel modeling techniques to the study of terrorism remains quite rare. Although multilevel analysis is not always feasible or even desirable, it does hold the potential to offer a number of advantages over more traditional ordinary regression techniques. The final section discusses some of the potential avenues through which future work might benefit from the broader application of multilevel models to terrorism research, along with additional considerations of the ways in which multilevel models can and should be conceptualized and applied in future work in this area.

Contextual Measures, Future Directions, and Additional Considerations

In many ways, the study of terrorism is inherently a multilevel enterprise. Extant work frequently investigates theoretically salient predictors at different levels of analysis. As Table 16.1 demonstrates, some prior work focuses on individuals or incidents; some on organizations, regions, or countries; and some on variations that occur over time.

The challenge of conducting multilevel analysis lies in integrating predictors across these levels of analysis. Often, the most difficult task is identifying and capturing theoretical predictors at the higher-order contextual level of analysis. In terrorism research, though, a clear precedent exists for the importance of these influences, which is evidenced by the broad range of macro-social variables examined in previous research. A number of studies have examined aggregate data on both group and national contexts. Smith et al. (2002), for example, categorize defendants charged with terrorist crimes into international groups, left-wing domestic groups, right-wing domestic groups, and domestic environmental groups. They find important differences in the treatment of terrorists who belong to international groups. Related work reports additional evidence that the political ideology of different domestic groups significantly affects the severity of punishment they receive (Johnson, 2012). These types of group-level characteristics should be more fully enumerated and studied in future work. Other group-level dynamics that could be examined as well include such factors as the politicization of different groups, their organizational characteristics, the amount of media and press coverage they receive, their relative financial assets, public opinions about their perceived threat and dangerousness, and historical information about the frequency and lethality of their attacks. In addition, network measures could also be created and examined for the size, density, and composition of members in different terrorist organizations.

Even more research has focused on the characteristics of aggregate geographical areas. This work examines regional, provincial, and international contexts. Bakke et al. (2009) examined variations across communities that ranged from small rural areas to large cities and found that certain community characteristics, including community population dynamics and prior history with violence, conditioned individuals' survey responses regarding terrorism. A number of studies have also examined variations in terrorism across different nation states. For example, Li and Schaub (2004) investigated the effect that different levels of globalization, democratization, and economic indicators exerted on terrorist events across countries. Globalization included factors such as trade, foreign investment, and economic development. Other factors examined included global region, historical experience with political conflict, and religious composition of the population. Similar work has examined additional country-level predictors of terrorist events, such as welfare spending (Burgoon, 2006); ethno-religious diversity, state repression, and political structure of governments (Piazza, 2006); and even whether or not a country has the death penalty (Mullins and Young, 2010). Additional factors that could be examined at the national level include the number of competing terrorist groups in a country, their relative prevalence, and the political power that they exert. These and related types of national-level measures should be explicitly incorporated into multilevel analyses in future work.

Future empirical work using multilevel models could also incorporate a broader range of time-varying correlates in terrorism research. A number of studies investigate temporal patterns of terrorist attacks, but often only with static predictors. Various social and political factors change over time and can be incorporated into multilevel models that include time as a level of analysis. LaFree and Tseloni (2006), for example, investigated time-varying measures related to the type of government democracy. Other theoretical factors could be similarly included in these types of models, such as shifts in local population demographics, terrorist attack characteristics, or structural characteristics of terrorist organizations themselves. Damphousse and Shields (2007), for instance, argue that major terrorist attacks are likely to alter the framing and interpretation of future terrorist attacks. It is therefore important to consider the recency and proximity of major events. In their study, they find evidence that large-scale attacks shape the proactive nature of prosecution patterns in

future cases. Damphousse and Smith (2004) have similarly suggested that the organizational structure and behavioral tactics of terrorist groups change over time. Therefore, the incorporation of time-varying predictors that capture these types of shifts could significantly improve our ability to explain terrorist outcomes in future work.

The aforementioned examples serve to illustrate the fact that much of the extant terrorism literature already involves key measures of social, political, and temporal contexts. Future work will benefit from the integration of these types of measures across levels of analysis. Ideally, information on individual terrorists and terrorist victims could be merged with data on social and political contexts and studied over time using multilevel analysis. There may also be opportunities for researchers to make significant advances by applying multilevel theoretical perspectives from mainstream criminology to the study of terrorism. As Freilich and LaFree (2015) point out, the vast majority of criminological research on terrorism is framed using theoretical perspectives such as routine activities or rational choice theory rather than other criminological theories, some of which have clear multilevel implications. Social disorganization theory, for instance, posits clear contextual effects on individual behavior and implies a need for multilevel analysis. A few recent studies have investigated the impact of traditional correlates of social disorganization theory on terrorist attacks. For instance, Akyuz and Armstrong (2011) examined these factors across 81 Turkish provinces and found that poverty and residential mobility were significantly related to terrorism, as was ethnic heterogeneity after other factors were controlled in their model. Similarly, LaFree and Bersani (2014) found that social disorganization factors, measured by language diversity, population heterogeneity, residential instability, and urbanization, predicted terrorist attacks across counties. Freilich et al. (2015) also examined county-level correlates of social disorganization along with additional measures, including local religious denominations, the proportion of the population divorced, and survey measures of trust. They found that a number of the contextual measures were significantly related to Far Right terrorist perpetrators' residence in a county. Although these measures have been increasingly examined, only rarely have they been analyzed using multilevel analysis (LaFree & Bersani, 2014).

Other multilevel theoretical perspectives that have been widely studied in criminology have yet to be explicitly applied to the study of terrorism. For instance, a substantial criminological research literature examines the importance of racial and ethnic threat theory (Blumer, 1958), primarily in the context of the exercise of state-sponsored social control (Eitle et al., 2002; Johnson et al., 2011; Stolzenberg et al., 2004). There is some evidence that ethnic threat processes may also be relevant for domestic terrorism. For instance, Piazza (2011) found that countries with greater minority group discrimination were more likely to experience terrorist attacks, even after controlling for economic development. The idea that racial, ethnic, and religious group dynamics can contribute to political violence therefore is not new, but the fact that these imply multilevel social and political processes that are amenable to multilevel analysis remains underappreciated. By broadening the theoretical conceptualization of the factors related to terrorism, other natural extensions of multilevel analysis to terrorism research are likely to become apparent.

Extensions of Multilevel Models

In addition to new theoretical applications of multilevel models, there are also a number of recent analytical advances and empirical extensions that may prove to be useful in future terrorism research. Multilevel models are typically conceptualized in a two-level hierarchical

framework in which each micro-level unit belongs to one and only one macro-level unit. Natural extensions of the model, however, can easily relax these constraints to allow for more complex and realistic data structures. It is relatively simple, for instance, to extend multilevel models to three or more levels of hierarchical nesting (e.g., Johnson, 2006). There are clear ways in which these types of applications could be applied in terrorism research. In Legewie's (2013) examination of the effect of a major terrorist attack in Bali, for instance, he hypothesized that the attack would have differential effects across both sub-regions and countries of Europe. In his analysis, individual survey respondents were nested within regions, and regions were simultaneously nested within countries. Similar applications could be utilized in other applications with various combinations of temporal, organizational, and spatial nesting of different data structures.

Multilevel models are also typically conceptualized in a strictly hierarchical manner in which each micro-level unit belongs to one and only one macro-level unit. In the real world, though, this is not always the case. Micro-level units are sometimes nested within multiple macro-social contexts that do not fit a clear linear hierarchy. When this is the case, the data are considered to be "cross-classified," or simultaneously nested within two distinct hierarchies. Time and space often involve cross-classified data, where observations are nested over time and nested within geographic units without time (Gelman & Hill, 2007:2). Johnson (2012) provides a concrete example of cross-nested data in which convicted terrorists are nested within terrorist organizations and also within the federal court contexts where they are sentenced. Because two defendants belonging to different terrorist groups can be sentenced in the same court, the data are cross-classified. Multilevel models are easily adapted to handle this type of cross-nested structure.

Other examples in which data might be cross-nested could include studies that examine both the country of origin and target country for different terrorist events. Krueger and Laitin (2008), for example, found that measures of political repression, such as civil liberties and political rights, were important predictors of both the origin and target of terrorist attacks. The authors analyze them as separate outcomes, but one might alternatively conceptualize them as cross-classified interrelated networks of analysis. Individual terrorists, as well as terrorist events, are often simultaneously nested within both countries of origin and the countries that they target. These types of models can also be useful for capturing changes in membership, such as when individual terrorists join or leave terrorist organizations or relocate to new geographic regions or locales. Any time researchers are interested in examining the joint and relative contribution of these types of overlapping hierarchies, cross-classified multilevel models can prove to be very useful. These types of models tend to be more flexible than the more common analysis of variance techniques because they do not require balanced sample designs or minimum observations per cell (Johnson, 2012).

There have also been recent strides made at incorporating multilevel approaches to data analysis with other useful advanced methodological techniques. Survey research routinely employs multilevel analysis, both to account for the nesting of respondents in neighborhoods or other macro-level units, and also as an explicit component of multilevel survey designs (Rabe-Hesketh & Skrondal, 2006). The common practice of employing multistage, clustered sampling schemes in household or other surveys directly supports the widespread use of multilevel models in this research. Terrorism research that employs survey designs could easily benefit from these approaches (Bakke et al., 2009; Legewie, 2013; Stevens et al., 2011). Multilevel analysis can also be incorporated into other related methodological approaches, such as structural equation modeling or latent class trajectory analysis, both of

which have been recently used to study terrorism. Smith and Damphousse (1996), for example, used structural equation models to analyze the sentence lengths of convicted terrorists in the federal justice system. Because there are 96 different federal districts, though, punishment processes and outcomes vary across federal court contexts (Johnson et al. 2008). New advances in multilevel structural equation modeling could be implemented to investigate these influences (Hox, 2013). Similarly, group-based trajectory analysis has been increasingly applied to the study of terrorism. LaFree et al. (2009), for example, identified three terrorism waves that occurred in the 1970s, 1980s, and early twenty-first century, and LaFree et al. (2010) found that terrorist attacks are highly concentrated in a small number of countries. Although these studies already represent highly sophisticated analyses, they have the potential to be further advanced through the incorporation of multilevel modeling techniques. Recent advances in growth mixture modeling (e.g., Kreuter & Muthen, 2008), for instance, allows the researcher to combine multilevel and group-based modeling approaches in ways that could prove beneficial in the study of terrorism.

Conclusions and Final Thoughts

Neither the determinants of terrorist behavior nor society's reaction to it occur in social isolation. For this reason, multilevel models can be useful for broadening the theoretical conceptualization and range of factors examined in extant terrorism research. They help solve inferential and statistical problems that emerge when researchers are confronted with data at more than one level of analysis, and they can offer a useful approach for modeling outcomes that vary across time and space. However, as with any statistical modeling approach, multilevel analysis has its strengths and weaknesses. It provides for a broad array of statistical modeling possibilities—individual effects can vary across aggregate units, multiple levels of analysis can be simultaneously examined, and interactive relationships across levels of analysis can be specified and estimated. The complexity of the models, however, is both an advantage and a disadvantage. Properly specifying the multitude of additional variance parameters can be challenging and opens up the possibility of model misspecification (Hox, 2002). Estimation difficulties are also a concern, especially when ecological predictors have high levels of shared variance. Although multilevel models have endless applications in terrorism research, judicious consideration of their relative strengths and weaknesses compared with simpler alternatives is an important requirement.

The preceding comments are also based on the assumption that researchers can gather multilevel data on terrorists and terrorist organizations. Perhaps the highest hurdle for broadening the application of multilevel models in terrorism research is the collection and dissemination of the types of data that are necessary to conduct hierarchical analysis. As others have noted, data availability is often a precluding factor when it comes to terrorism research (LaFree & Miller, 2008). Traditional criminological data derive from several sources, including officially recorded data, victimization data, and self-report data, which can often be linked to contextual sources of information, such as neighborhood conditions or census data over time. These same types of data are not widely used in much of the extant terrorism research. Studies that rely on country-level data often lack information on individual terrorists and terrorist organizations. Similarly, studies that utilize individual-level data often lack contextual measures of import. Much of the existing work uses open-source data that is limited by the information reported in public media outlets. All of these issues are valid concerns when it comes to multilevel analysis. Moreover, the quality of

record keeping and even specific definitions of what qualifies as terrorism are likely to vary across social and political contexts.

   To overcome these difficulties, researchers will need to redouble their efforts to collect the types of data that are theoretically relevant for different levels of analysis. In some cases, multilevel research may not be that useful or necessary. Research questions that are focused simply on describing global patterns of terrorist attacks across countries, for instance, will require only country-level data. However, instead of simply describing global attack patterns, the ultimate goal should be to answer more fundamental questions about how and why attacks occur, and these types of questions often lend themselves to multilevel analysis. Collecting and analyzing multilevel data is no small endeavor, but neither is it a Sisyphean task. For the full potential of multilevel models to be realized in terrorism research, scholars need to collect data across multiple levels of analysis, including individual participants in terrorist groups, characteristics of the terrorist organizations, and broader macro-social contexts on the regions and countries where they originate or engage in political violence. A core argument of the current chapter is that such efforts provide an intellectual payout that is worth the effort—there are significant benefits to be gained by collecting and analyzing data across units of analysis, making multilevel models a useful tool for expanding our understanding of the causes and consequences of global terrorism.

Notes

1   Various terms have been used to describe multilevel statistical models, such as *hierarchical models*, *nested models*, and *mixed models*. Although these monikers are often applied interchangeably, subtle differences characterize them. *Multilevel modeling* is used here as a broad encompassing term that captures the class of statistical models that are designed to analyze and infer relationships across more than one level of analysis.
2   This section provides only a general introduction to the basic statistical advantages of multilevel models. Interested readers should refer to more formal and technical treatments of these models, which are elaborated in detail elsewhere (see, e.g., Raudenbush & Bryk, 2002; Luke, 2004; Goldstein, 1995; Johnson, 2010; Snidjers & Bosker, 1999; Kreft & de Leeuw, 1998; Gelman & Hill, 2007).
3   The table is not meant to provide a comprehensive review of the vast empirical research literature on terrorism, but rather to demonstrate the range of empirical approaches that are commonly applied in contemporary research. It focuses mainly on studies published in criminological outlets and/or studies that hold the potential for multilevel research applications.

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Methodological Advances in the Study of Terrorism: Using Latent Class Growth Analysis to Estimate Terrorism Trends

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Introduction

In the past 20 years, there have been considerable methodological and statistical advancements in the study of terrorism (see Morris & LaFree, this volume). Previous assessments of empirical terrorism research were quite pessimistic, especially in regard to the quality of quantitative research. In particular, several scholars had highlighted the paucity of systematic, quantitative evidence on terrorism (Schmid & Jongman, 1988; Silke, 2001; Lum, Kennedy, & Sherley, 2006). Much has changed since these earlier critiques. As LaFree and Freilich (2012) note, increases in federal funding for terrorism research were subsequently followed by increases in quantitative terrorism research within criminology, leading to what has been termed "global criminology" (LaFree & Freilich, 2012:2). As part of this movement, studies documenting trends in terrorist activity using sophisticated methodological and statistical tools have become increasingly common (LaFree, Yang, & Crenshaw, 2009; LaFree, Morris, & Dugan, 2010; Mullins & Young, 2012; LaFree & Freilich, 2012; Sandler, 2014). One example includes the application of latent class growth analysis (LCGA) to the study of terrorism trends. While LCGA was originally created to model individual-level patterns of development over time (Nagin & Land, 1993), it has also been applied to describe crime at places such as communities and street segments (Griffiths & Chavez, 2004; Weisburd, Bushway, Lum, & Yang, 2004; Weisburd, Morris, & Groff, 2009). More recently, it has been used to describe patterns of terrorism for countries and terrorist groups over time (LaFree, Yang, & Crenshaw, 2009; Miller, 2012; Morris & Slocum, 2012; LaFree, Morris, & Dugan, 2010).

This chapter reviews the literature that has used LCGA to estimate terrorism trends. I begin with a brief overview of LCGA, and then review those studies that have used LCGA to estimate terrorism trends, both at the country and terrorist group levels. As with any methodological and statistical approach, there are limitations to the approach, and I discuss those limitations specific to terrorism research. Finally, I conclude with areas of future research in terrorism that may benefit from the application of LCGA or related approaches.

LCGA

LCGA, often referred to as semi-parametric group-based trajectory analysis (SPGM) or group-based trajectory analysis (GBTM), has enjoyed widespread use since its creation. Indeed, several reviews of the LCGA approach have indicated increased application not only within criminology, but also other disciplines such as clinical psychology and medicine (Nagin & Odgers, 2010a, b; Piquero, 2008; Bushway & Weisburd, 2006). LCGA was designed to identify and construct latent classes (i.e., groups) of cases that share a similar pattern of behavior over time, and was first applied to the study of within-individual antisocial behavior and criminal offending over time (Nagin, 2005; Nagin & Land, 1993). LCGA is a semi-parametric approach that uses discrete groups to approximate an unknown, continuous distribution. The model rests on the assumption that the population consists of a discrete number of unobserved classes, each with its own distinct behavioral pattern (Nagin & Land, 1993; Roeder, Lynch, & Nagin, 1999). These classes reflect the average level and shape of development in an outcome for those assigned to each class and capture overall variation in persistent unobserved heterogeneity in the data (Kreuter & Muthén, 2008; Nagin & Land, 1993). Persistent unobserved heterogeneity refers to unobservable time-stable differences between cases such as individuals, or as applied to macro-level units between places or groups. While traditional growth models capture individual variability around an average developmental trend by using a random intercept and slope that are assumed to follow the normal distribution, LCGA loosens this assumption of normality and instead extracts sub-groups of individuals with distinct trajectories to approximate the overall trend in the data (Nagin, 2005).[1]

LCGA can accommodate several types of data, including count (Poisson and zero-inflated Poisson), psychometric, and binary data (Jones, Nagin, & Roeder, 2001).[2] Typically, the researcher first determines the optimal number of classes through an iterative process and then adjusts the polynomial specifications for the parameters (Nagin, 2005). The choice regarding the ideal number of classes to extract from the LCGA should be based on both statistical and substantive or theoretical criteria (Brame et al., 2001; Nagin, 2005). There are several empirical criteria for assessing model fit.

The first useful fit statistic is the Bayesian Information Criterion (BIC). The BIC is a statistic that allows researchers to compare each model specification to select the one that most closely matches the underlying data.[3] Another useful tool for assessing the model fit is the posterior probability. Posterior probabilities are used to assess the extent to which the models correctly classified the units (e.g., countries or terrorist groups) into specific trajectory classes, given their observed data, and can indicate how well each model corresponds to the data (Nagin, 2005). Nagin (2005) suggests that average posterior probabilities above 0.70 are acceptable and sufficient. Posterior probabilities are especially important for terrorism studies using LCGA, as the purpose of this research has been to identify a group of countries or terrorist groups that have high rates of terrorist activity over time and to describe the overall distribution of terrorism. Posterior probabilities allow the analyst to evaluate the extent to which this goal has been achieved and may provide some indication of model fit. Finally, Nagin (2005) also suggests computing the odds of correct classification (OCC) for each trajectory class. OCC represents the ratio of the likelihood of correct classification based on the model to the likelihood of correct classification based on random assignment. An OCC value of greater than five for each trajectory class is generally considered indicative of accurate classification.

LCGA was initially designed to disaggregate the age–crime curve and enable researchers to identify distinct patterns of criminal behavior over time (Nagin & Land, 1993; see Piquero, 2008). It has been used extensively to test typological or taxonomic developmental theories of antisocial and criminal behavior (e.g., Moffitt, 1993; Nagin, Farrington, & Moffitt, 1995; D'Unger, Land, McCall, & Nagin,1998; Piquero, 2008). More recently, it has been used to construct distinct trajectories of crime across geographic places. The idea that crime and violence is spatially concentrated at geographic places has a long history in criminology and is prevalent in contemporary criminology (Quetelet, [1831]1984; Shaw, Zorbough, McKay, & Cottrell, 1929; Shaw & McKay, 1942; Sherman et al., 1989; Sherman & Weisburd, 1995). For example, recent studies have used LCGA to identify the clustering of crime more dynamically across multiple points of time at various geographic locations (Griffiths & Chavez, 2004; Weisburd et al., 2004; LaFree et al., 2006; Piquero & Piquero, 2006; LaFree et al., 2009; Weisburd et al., 2009; Yang, 2010). The purpose of much of this work is to identify distinctive patterns in crime at places over time, and, in particular, the existence of places that exhibit consistently high concentrations of these events. Terrorism researchers have also turned to LCGA as a method for summarizing longitudinal trends in country-level or terrorist-organization-level activity over time (e.g., LaFree et al., 2010; Morris & Slocum, 2012; Miller, 2012; Dugan & Yang, 2012). LCGA has several advantages that make it appealing for those seeking to examine trends in terrorism.

First, LCGA can provide a visual summary of the data by grouping multiple longitudinal patterns into a relatively small number of trajectory classes that reflect different levels and trends. This greatly simplifies the interpretation of complex data. Indeed, perhaps one of the least contentious and most common uses of LCGA is to describe succinctly longitudinal patterns of behavior (Skardhamar, 2010). Second, results generated from LCGA have the potential to inform policy by identifying, describing, and, perhaps predicting geographic areas that experience chronically high numbers of attacks. Prior research at the macro-level indicates that one trend likely to emerge in cross-national studies of terrorism is a high-rate trajectory class (LaFree et al., 2010). Other potentially interesting trends for policymakers include trajectory classes that are rapidly increasing or decreasing. Similarly, LCGA applied to terrorism at the terrorist group-level may also aid in risk assessment and counterterrorism policies directed at such groups. Finally, the trajectory classes extracted using LCGA can be used to create country-level profiles of geographic areas that are at high or increasing risk for terrorist activity, or profiles of terrorist groups that are at risk of attacking, or conversely, most likely to desist. Just as LCGA at the micro-level has been useful for clinicians interested in diagnosing and preventing behavior related to antisocial and criminal offending, such a classification system may also hold promise for policymakers interested in developing counterterrorism policies directed at countries or terrorist groups.

LCGA Applied to Terrorism

Much of the recent work applying LCGA to terrorism trends has used data from the Global Terrorism Database (GTD; see LaFree & Dugan, 2007 and LaFree, Dugan, & Miller, 2014, for a review of GTD). The GTD is an open-source database that consists of over 125,000 domestic and transnational terrorism events that occurred between 1970 and 2013 for virtually all countries and territories in the world. The total number of incidents included

in the GTD has changed over time as the database is continually updated by researchers at the National Consortium for the Study of Terrorism and Responses to Terrorism (START). The GTD defines terrorism as "acts of violence by non-state actors, perpetrated against civilian populations, intended to cause fear, in order to achieve a political objective" (LaFree, Dugan, & Miller, 2014, p. 13). In the following sections, I review those studies that have applied LCGA to data from the GTD to examine both terrorism trends at the country-level as well as for terrorist groups over time.

LaFree, Morris, and Dugan (2010; see also LaFree, Morris, Dugan, & Fahey, 2006) provided one of the earliest applications of LCGA to terrorism trends at the country level. They used a database created from merging the GTD with the RAND-MIPT database, which produced 73,961 domestic and transnational terrorist attacks for 206 countries and territories between 1970 and 2006. The database includes more countries than presently reported by official sources because it includes a number of disputed territories that are treated as countries (e.g., West Bank/Gaza, Northern Ireland), and it includes countries that either came into existence or dissolved at some point between 1970 and 2006. Using Poisson and zero-inflated Poisson models, they analyze total attacks, as well as attacks attributed to terrorist groups ($n = 28,298$) and attacks that resulted in a fatality ($n = 22,555$).

Using LCGA, they construct five trajectory classes of country-level terrorist activity. The five trends extracted can be labeled: (1) low/stable (trajectory class 2); (2) moderately low/stable (trajectory class 3); (3) moderately high/decreasing (trajectory class 4); (4) high/stable (trajectory class 5); and (5) low/increasing (trajectory class 1). All posterior probabilities were over 0.70 (0.86–1.00). One of the more striking trends is the "high and stable" class, which consisted of countries that exhibited high levels of terrorism activity throughout the time span. Although only 10 countries (5%) were classified in the high and stable group, it accounted for almost 40% of the total attacks, with an average of 2,531 attacks for the time span. Countries in this class include: Colombia, France, India, Israel, Northern Ireland (treated as a country), Pakistan, Russia, Spain, Sri Lanka, and Turkey.

Another notable trend is the low and increasing trajectory class, which is characterized by low levels of attacks (near zero), dramatically increasing in 1999. Only 5% of countries fall within the low/increasing trajectory class, and they account for 6,952 total attacks and average 695 attacks for the time span. Countries in this class include: Afghanistan, Bangladesh, Indonesia, Rwanda, and Thailand.

The moderately high trajectory class accounts for the second highest average number—1,155 attacks; 10.2% of countries fall within this class, and they are characterized by a rapid increase in attacks throughout the 1970s, high activity throughout the 1980s, and then a steady decline post-1991. The authors note that many countries (e.g., Chile, El Salvador, Peru) in this class had terrorist groups organized around Marxist–Leninist ideologies, and many of these groups substantially reduced their attacks after the collapse of the Soviet Union.

The final two trajectory classes represent countries that experienced very little terrorist activity throughout the time span. For example, 116 countries (56.3%) were grouped into the "low and stable" trajectory classification, which accounted for only 2.6% of total attacks. Similarly, 23.3% of countries were classified into the "moderately low and stable" class, accounting for 10.8% of all attacks.

They also found relatively high and stable country-level concentrations of terrorism activity in their analyses of fatal terrorism attacks and attributed attacks (i.e., attacks attributed to a known terrorist group). Although they extracted fewer trajectory classes for fatal attacks and attributed attacks (three and four classes, respectively), the overall pattern is

quite similar. For both analyses, the vast majority of countries experienced relatively few fatal or attributed attacks over time. They also found evidence for a group of countries that experienced persistently high levels of terrorism compared with other classes. Approximately 9% and 7% of countries accounted for 67% and 56% of attributed and fatal attacks, respectively.

LaFree, Yang, and Crenshaw (2009) also used LCGA to examine the trajectories of foreign terrorist groups that attacked the United States between 1970 and 2004. Using data from the US State Department and other government agencies to identify 53 anti-US terrorist groups, they examined the 16,916 terrorist attacks attributed to these groups. They conducted separate LCGA on both US-related and non-US-related terrorist attacks. Because the outcome for both analyses is an annual count of attacks, they used zero-inflated Poisson (ZIP) models.

For the attacks against US targets, they found four classes of terrorist offending over time: (1) sporadic; (2) twenty-first-century boom; (3) 1980s boom; and (4) 1970s boom. These groups were responsible for 570 total and 111 fatal attacks in the United States. The majority of terrorist groups fell within the sporadic group—44% of groups were classified into this class. Although this was the largest class of terrorist groups, they were responsible for the least amount of terrorist events (8.4%). The sporadic class is characterized by relatively low levels of attacks that were episodic and infrequent throughout the time period. Terrorist groups in this class include: Japanese Red Army, Jemaah Islamiyah, and the Popular Liberation Army (EPL).

The 1970s boom contains 22.4% of all terrorist groups, and accounts for 30% of all attacks and only 1.5% of all fatalities. This class has the highest level of attacks at the start of the time series and has the most attacks during the 1970s, ultimately peaking in 1974 and steadily declining until 1980, when rates fell close to zero. Terrorist groups in this class include: Black September Organization, Red Brigades, Peoples Liberation Forces, and the Turkish People's Liberation Army.

The second largest class of terrorist groups is the 1980s boom, with 29.3% of all groups, and, as the label implies, this class of terrorist groups are characterized by low rates of terrorism until the 1980s, at which point there is a steady increase, peaking in 1990, followed by sharp declines. These terrorist groups include: Hezbollah, M-19, New People's Army (NPA), Revolutionary Armed Forces of Colombia (FARC), Revolutionary People's Struggle (ELA), and the Shining Path (SL). The 1980s boom class accounts for 56.5% of all attacks.

The most lethal class of terrorist groups, those with the highest percentages of fatalities, is the twenty-first-century boom class. Only 4.3% of the sample is classified into the twenty-first-century boom class, yet they account for 84.1% of all fatalities. Notably, this class of terrorist groups has extremely low levels of attacks until the late 1990s, at which point there is a dramatic increase, peaking in 2004. By the end of the observational period, this class has substantially higher levels than all other classes. Not surprisingly, the two groups that are included in the twenty-first-century boom class are al-Qaeda and the Taliban. This finding is consistent with LaFree et al.'s (2010) finding of an increasing trajectory class in the country-level analysis that consists of countries such as Afghanistan and Iraq.[4]

LaFree, Yang, and Crenshaw (2009) also conducted LCGA on non-US attacks. Although they found many similarities, there are some notable differences between non-US and US attacks. For example, as in the case of US attacks, they found that the four class trajectory model was the best-fitting model, and they extracted the following groups: (1) sporadic; (2) 1970s onset; (3) 1980s boom; and (4) twenty-first-century boom. The average within-class posterior probabilities for their classes was 0.96. These groups accounted for 16,346

total attacks and 38,113 fatalities. Once again, the vast majority of terrorist groups fell within the sporadic group (46.7%), and they only accounted for 2.5% and 2.8% of all attacks and fatalities, respectively. Terrorist groups classified into this trajectory include: Japanese Red Army, Jemaah Islamiyah (JL), Palestine Liberation Front (PLF), and the Turkish People's Liberation Army.

The overall level for the 1970s onset trajectory class is noticeably lower than in the case of US attacks, and they do not exhibit high levels of attacks in the 1970s, though they have the highest level at the outset. This trajectory class contains 21.6% of the sample, and they account for 9% of all attacks and 6.5% of all fatalities. Unlike the US attacks analysis, the 1970s onset trajectory appears to have engaged in more non-US attacks post-1970s, with attacks also occurring in the late 1980s and early 1990s. The terrorist groups in this class include Hezbollah, Black September Organization, Popular Liberation Army (EPL), and Tupamaros.

The 1980s boom trajectory also contains 21.6% of the sample; however, they are responsible for 85.2% and 84.3% of attacks and fatalities—a larger portion of attacks and a substantial increase in fatalities. In the US attack analysis, the twenty-first-century boom class was responsible for the most fatalities. In the non-US attack analysis, the 1980s boom trajectory class clearly has the highest levels for the longest period of time, and is the most lethal class of terrorist groups. The terrorist groups classified into the 1980s boom class include M-19, National Liberation Front of Colombia (ELN), Red Brigades, Revolutionary Armed Forces of Colombia (FARC), and the Shining Path (SL).

Finally, the twenty-first-century boom class consists of 10.2% of terrorist groups and accounts for 3.3% of attacks. Unlike the US attacks analysis, the twenty-first-century boom class does not account for the most fatalities—only 6.4%. These terrorist groups are characterized by very low levels of attacks (close to 0) throughout most of the observational period, increasing in the late 1990s, and ending the period with higher levels compared with other trajectory classes. There are slightly more terrorist groups included in the twenty-first-century boom class for the non-US attack analysis as compared with US attacks. These groups include Abu Sayyaf Group (ASG), al-Qaeda, Lashkar-e Taiba, Moro Islamic Liberation Front (MILF), and Taliban.

LaFree, Yang, and Crenshaw also compare assignment to trajectory classes across both US and non-US attack analyses. For 44 of the 53 terrorist groups that launched attacks against both US and non-US targets, 100% of the groups classified into the twenty-first century boom class for US attacks were also classified into the same class for non-US attacks (al-Qaeda and Taliban). Over 72% of terrorist groups classified into the sporadic trajectory class in the US attack analysis were also classified into the same class for non-US attacks. Finally, 50% and 57.1% of terrorist groups classified into the 1970s and 1980s trajectory classes in the US attack analysis were also classified into those corresponding classes in the non-US attack analysis. The 1980s boom class consists almost entirely of Latin American revolutionary organizations, such as the Shining Path of Peru, FARC in Colombia, and FMLN in El Salvador.

Importantly, across both analyses, there were three sequential waves or patterns of terrorism: 1970s, 1980s, and twenty-first century. LaFree and colleagues state that this represents "wave-like boom and bust cycles," also termed the "cycle hypothesis," and suggest that this is a result of the contagious nature of terrorism attacks. Additionally, the sporadic trajectory class, which contained almost half of all terrorist groups for both US and non-US attacks, was characterized by episodic, infrequent terrorism activity.

Miller (2012) also employed LCGA to examine terrorist groups over time with a special focus on developmental patterns of onset, frequency/magnitude, and desistance from

terrorist attacks. Specifically, she used LCGA to model the developmental trajectories of terrorist groups for 557 terrorist groups that were active for at least 1 year between 1970 and 2008. Using data from the GTD, she was able to identify 40,448 terrorist attacks attributed to these terrorist groups. She employed a rather unique way of estimating LCGA as compared with the LaFree, Yang, and Crenshaw study. Whereas LaFree et al. (2009) estimate terrorist group activity over time (1970–2004) and LaFree et al. (2010) estimate attacks in countries over time (1970–2006), thereby estimating trajectories that largely capture patterns in overall magnitude or frequency of attacks, Miller estimates three LCGA models that assess patterns of onset, frequency/magnitude, and decline in terrorist group attacks over the life span of the terrorist group.

In her first LCGA model, she examines terrorist group activity (annual counts) post-peak attack year in an attempt to capture the magnitude and decline of terrorist attacks over time. This model is referred to as the "post-peak frequency model" and estimates the magnitude and speed of a terrorist group's decline after they reach their peak year. In her second model, she estimates the decline in terrorist attacks exclusively by examining the ratio of the number of attacks that year to the number of attacks at the terrorist group's peak year of activity. Her first LCGA model uses a ZIP distribution, and the second employs an uncensored normal distribution. Finally, she estimates patterns of onset by examining annual count data for terrorist groups from their first year of observed data (an attack) to their peak year.

Results from the "post-peak frequency" model resulted in five trajectory classes: (1) low frequency/rapid desistance; (2) low frequency/moderate desistance; (3) moderate frequency/rapid desistance; (4) high frequency/moderate desistance; and (5) high frequency/minimal desistance. The "low frequency/rapid desistance" group includes the majority of terrorist groups: 69.5% of all terrorist groups ($n = 387$). This class is characterized by a much lower peak start (fewer than four attacks on average) than the rest of the classes, and then sharply declining, reaching zero attacks within 5 years. Miller notes that many of the groups in this class are not well-known; however, there are notable exceptions such as Aum Shinri Kyo—the group associated with the Tokyo subway sarin gas attack in 1995. The terrorist groups in this class account for the least amount of all attacks and fatalities, 7.3% and 8.5%, respectively. This class of terrorist groups also has the shortest life span, with an average of 5.6 years.

The "low frequency/moderate desistance" group has a similar trend, though they begin the series at a much higher level and have a slower rate of desistance. This class contains 20.3% of all terrorist groups, and they average approximately 16.5 attacks during their peak year. Terrorist groups in this class include the Palestine Liberation Organization's Black September, the Irish National Liberation Army (INLA), the Real Irish Republican Army (RIRA), and the Official Irish Republican Army (OIRA).

The third trajectory class, the "moderate frequency/rapid desistance" class, consists of 6.6% of the sample. Miller states that this group is particularly notable, given the high level of attacks at their peak, and their subsequent fast rate of decline. The African National Congress (ANC) was one prominent group classified into this trajectory class.

The fourth and fifth trajectory classes represent terrorist groups that had much higher levels of attacks as compared with the aforementioned groups. Although the "high frequency/moderate desistance" ($n = 16$) and "high frequency/minimal desistance" ($n = 5$) classes contain relatively few terrorist groups compared with the other classes, they account for 8,800 attacks. Moreover, a substantial portion of these attacks (54%) occurred after their peak year. Groups included in the high frequency/moderate desistance category include

al-Qaeda in Iraq, the Liberation Tigers of Tamil Eelam (LTTE), M-19, Shining Path (SL), and the Taliban. Of the five groups in high frequency/minimal desistance, four rank in the top six most active groups in the GTD: Basque Fatherland and Freedom (ETA), Irish Republican Army (IRA), National Liberation Army of Colombia (ELN), Nicaraguan Democratic Forces (FDN), and the Revolutionary Forces of Colombia.

Results from the "post-peak ratio" model, which focuses solely on estimating the decline in terrorist activity, extracted two classes: (1) desistance, and (2) persistence. By far, most of the terrorist groups are classified into the desistance class, with approximately 81.5% of the terrorist groups in this class. Terrorist groups in the desistance trajectory class reduced their attacks by 29% within 1 year after their peak year of attacks. The decline continues over time, but not as steep, resulting in a 5% decline of their peak activity within 5 years. The desistance class accounts for 82% and 83.1% of all attacks and fatalities, respectively.

The persistence class only consists of 18.5% of all terrorist groups, and they account for 18% of all attacks and 17% of all fatalities. Although these terrorist groups are classified as persisting over time, they also exhibit a dramatic decline in attacks after their peak year, but nonetheless still continue to engage in terrorist activity. Specifically, Miller estimates that the terrorist groups in the persistence class engage in approximately 10% of their peak activity, even as far out as 14 years later. Terrorist groups in this class include al-Qaeda, the Earth Liberation Front (ELF), and the LTTE. The persistent class accounts for substantially less attacks and fatalities, as compared with the desisting class of terrorist groups. This may be a function of the analysis. The analysis ignores variation in the overall level or frequency of attacks by virtue of its focus on the ratio of the number of attacks per year to the number of attacks at the peak year of activity.

The final LCGA model estimated by Miller examines patterns of onset for terrorist groups by examining patterns of attacks after the first recorded year in which the group launches an attack (onset) and ends with the peak year of terrorist attacks. Three terrorism onset trajectory classes are extracted from the data: (1) low frequency/slow onset; (2) high frequency/moderate onset; and (3) high frequency/rapid onset. Of all terrorist groups, 74.6% are classified into the "low frequency/slow onset trajectory" class, and exhibit relatively low levels of terrorist attacks (an average of less than 10 attacks per year) and a slow progression to their peak year. Most of these terrorist groups take approximately 20 years to reach their peak year of attacks.

The "high frequency/moderate onset" class contains 20.6% of terrorist groups and exhibits a much higher rate of attacks, as well as overall peak of attacks, as compared with the low frequency/slow onset class. The speed in which they reach their peak year of attacks is fairly gradual, occurring over the course of approximately 13–14 years. Terrorist groups in this class include: the LTTE and the Revolutionary Armed Forces of Colombia (FARC).

The final class of terrorist groups extracted is referred to as the "high frequency/rapid onset" class. This set of terrorist groups, once coming into recorded existence, engages in a high and frequent level of attacks and reaches its peak year much faster than the other terrorism trajectory classes. Only 4.7% of the terrorist groups are in this class and only three of the 26 terrorist groups take longer than 4 years to reach peak level of attacks. Terrorist groups in this class include: al-Qaeda in Iraq, the FMLN, the IRA, and the Nicaraguan Resistance.

Miller also examines the conditional probability of membership in a post-peak terrorism trajectory class given membership in a declining or desistance trajectory class. She finds that those terrorist groups assigned to the high frequency/rapid onset class are three times more likely than high frequency/moderate onset terrorist groups to be included in either

moderate frequency/rapid desistance, high frequency/moderate desistance, or high frequency/minimal desistance classes.

Limitations and Methodological Issues with LCGA

Although group-based methods have been widely employed to study a variety of outcomes (Piquero, 2008), there is some degree of controversy surrounding their use (see Nagin, 2004; Sampson et al., 2004; Raudenbush, 2005; Sampson & Laub, 2005). While many concerns apply broadly to all research using group-based methods (and even to other types of analysis more generally), some may be exacerbated in macro-level terrorism studies that seek to model yearly counts of terrorist activity at the country or group level. In the following subsections, I briefly discuss several methodological considerations related to the use of these methods for macro-level studies of terrorism trends.[5]

True Meaning of Trajectory Classes

Proponents of this method have argued that these models can be used to identify groups of cases that follow distinct developmental trajectories and allow for the possibility that outcomes for different groups are generated by different processes (Nagin, 1999; Nagin & Odgers, 2010b). However, there has been considerable debate over the true meaning of the groups. In particular, many question whether these groups actually reflect real distinct differences in the population (Raudenbush, 2005; Sampson & Laub, 2005; Sampson et al., 2004; Skardhamar, 2010)—that is, are these classes of offenders fundamentally different and thus represent fundamentally different causal processes? Or, do these classes reflect an approximation of offending variation on a continuum? The former represents the belief that any observed differences between offenders are a result of different *kinds* of causes that distinguish low-rate offenders from high-rate offenders, and is thus more in line with taxonomic theories of offending such as Moffitt's (1993). The latter, on the other hand, reflects the belief that any behavioral differences between offenders are the result of a difference in *degree*—thus, the same causes of offending behavior apply to all offenders and is more compatible with general theories of offending. The utility of LCGA for describing patterns in data is not subject to debate. Rather, contention lies in the interpretation of such patterns as real versus ideal approximations.

There are two approaches to interpreting the meaning and significance of the classes extracted by LCGA: direct and indirect (Bauer, 2007; Bauer & Curran, 2004; Skardhamar, 2010). The direct interpretation states that extracted classes represent literal groups that are present in reality. Skardhamar (2010) states that the indirect approach either (1) focuses on the overall distribution of classes, or (2) interprets the classes as being real (as in the case of the direct interpretation), but acknowledges that the groups may not *truly* be real. He cautions against using the second indirect approach and notes that much of the criminological literature employing LCGA, most notably developmental criminology, has done so. This critique is relevant for those scholars using LCGA as a means of providing evidence for taxonomic theories versus general theories of offending. In a series of simulation studies, he argues that LCGA, although able to extract different classes, is unable to assess the meaningful existence of these classes. Moreover, he argues that the classes can capture both systematic and random variation, and that this variation may reflect other processes, such

as sampling bias. Nonetheless, Skardhamar (2010, p. 314) concludes that LCGA can be a "useful technique for data reduction for descriptive purposes." This conclusion is critical for studies examining terrorism, as most of the research applying LCGA to terrorism has taken this descriptive approach.

LCGA: A "Theory-free" Method

The absence of a clear theoretical framework is a limitation that is common among many of the terrorism studies applying LCGA. This is particularly important for supplementing the empirical criteria for selecting groups, since the exact and ideal number of classes to extract is sometimes unclear. Skardhamar (2010) argues that LCGA technically does not identify classes, rather, that classes are constructed from the data. Thus, having a guiding theoretical expectation about the number of classes is useful for determining the optimal number of classes. Indeed, researchers often find that empirical fit statistics such as the BIC continue to improve with the extraction of classes, making this fit statistic less informative for deciding the optimal number of classes (Sampson et al., 2004; Nagin, 2005; Kreuter & Muthén, 2008; Skardhamar, 2010).

Theories that will be useful for guiding group-based analysis of country-level trends must focus on explaining why certain countries or groups are expected to have different patterns of terrorism over time. Rapoport's (2004) expectation of four waves of terrorism over time may provide a starting point for guiding terrorism research using LCGA or related approaches. Results from both LaFree et al. (2009) and LaFree et al. (2010) are compatible with Rapoport's framework.

Distribution of the Outcome

A fundamental consideration in all research is how to model the outcome, given the underlying distribution of the data. Much of the work in developmental criminology has modeled numbers of arrests or convictions. These count data generally contain a high proportion of zeros, and the data often suffer from over-dispersion (i.e., the variance of the data exceeds the mean), which requires special modeling considerations. The distribution of yearly counts of terrorism across countries may be quite different from the distribution of arrests or convictions. While macro-level counts of terrorist events are likely characterized by over-dispersion, terrorism data often has clustering at the left and right ends of the distribution, with many countries experiencing no events in a given year, and some experiencing a large number of incidents. The same can be said when examining patterns in both attacks and fatalities for terrorist groups over time.

Group-based analyses of arrest and conviction data often use the ZIP model to handle over-dispersion. ZIP models account for the excess of zeros due to intermittency (periods of inactivity or non-offending) by assuming that there are two processes that generate zeros in the data (Long, 1997). There are zeros (non-offending) that result from a lack of risk, and there are zeros that result from a lack of opportunity. For example, prior research has suggested that intermittency occurs when potential criminals do not offend because they had no opportunity to offend (e.g., they were incarcerated), despite their desire to do so (Nagin & Land, 1993).

The ZIP model, however, may be less appropriate for studying counts of terrorist events at the country-level. First, the model assumes that a Poisson process generates the outcome

for those who are at risk, but the distribution of terror attacks is highly skewed and likely violates this assumption. This is true for countries with non-zero counts of terrorist activities in a given year. Second, it is unclear if there is a strong theoretical justification for an intermittency parameter at the country-level. While it makes sense that individuals may refrain from committing crime because they are incarcerated or lack the opportunity to offend, it is less apparent if this logic applies to terrorist attacks at the country or group level. At the macro-level, more opportunities exist for attacks to occur. Moreover, even if a country has no terrorist groups within its borders, it may still be susceptible to attacks from international terrorist organizations.[6] Finally, zero counts may be less likely in macro-level terrorism data as compared with micro-level studies of arrests and convictions. For example, one study that used ZIP models to estimate individual-level trajectories of convictions found that between 83% and 99% of the individuals in the study had zero convictions in any given year, and almost 60% of the participants had no convictions at all (Kreuter & Muthén, 2008). In comparison, all countries and groups in GTD have experienced or launched, respectively, at least one terrorism event since 1970.

Changing Global Landscape and Changing Terrorist Groups

Another issue that is somewhat unique to cross-national research is that new countries emerge and others dissolve over time. For example, the Soviet Union became 15 independent states in the early 1990s. This challenge is similar to that faced by researchers who study individual offending and must account for mortality. This work has found that failing to account for mortality can underestimate the percentage of high-rate chronic offenders, because offenders who die are more likely to be classified into declining groups (Eggleston et al., 2004). Country-level research, however, is complicated by the fact that countries do not exit the sample, but rather are transformed into new entities.

Prior research has handled changes in national borders by coding countries as missing during those time periods they were not in official existence (LaFree et al., 2010). These coding decisions for changes in geographic boundaries will likely impact the nature and shape of the resulting trends. Research has found that many transitional countries (i.e., countries that have transitioned from one official entity into another during the study period) fall into either the high rate or the increasing terrorism trajectory groups (LaFree et al., 2010). Additionally, terrorist groups may also splinter into new groups or merge with other more established groups during the course of their life span.

Within-Group Variability and Alternative Group-based Models

The final issue surrounds the decision to use LCGA or other related group-based models, such as general mixture modeling (GMM), to estimate terrorism trends. LCGA allows for the existence of multiple groups of countries, with each group following a distinct trajectory, but it does not allow for variability within trajectory classes. That is, within-class growth factor variances and co-variances are constrained to equal zero (Kreuter & Muthén, 2008; Muthén, 2004; Muthén & Asparouhov, 2008; Petras & Masyn, 2010). In comparison, GMM allows country-specific intercepts and slopes to vary within trajectory classes.

Substantively, this means that LCGA assumes that countries or terrorist groups within a terrorism trajectory group are homogeneous with respect to the development of terrorism

activity over time. This assumption may be tenuous at best and inaccurate at worst. Although the countries or terrorist groups within a trajectory class may share a general trend, there also may be significant variation within the classes in the overall level (intercept) and rate (slope) of terrorist activity over time. Additionally, when there are outliers in the data, which is true of country-level violence-related outcomes (LaFree, 1999; Neapolitan, 1996; Stamatel, 2009), allowing for random effects within groups can minimize the influence of extreme cases (Kreuter & Muthén, 2008:21).

Morris and Slocum (2012) examine the robustness of LCGA-generated trajectory classes of country-level terrorism trends to alternative methods of measurement and model specification. They compare group-based models that constrain within-class variation (LCGA) and those that allow countries to vary within class, such as general mixture modeling (GMM). Although they find slight differences between the two approaches, the overall pattern and distribution of trends from each analysis is similar. They also note that most existing LCGA studies use unconditional models—that is, they estimate trajectories without covariates. Yet, many have argued that unconditional models are not always suitable for identifying the correct number of classes, because they can lead to model misspecification and alter the grouping of countries (Kreuter & Muthén, 2008; Muthén, 2004).

Future Research

LCGA applied to macro-level terrorism data certainly has its fair share of limitations, many of which can be addressed through future research. First, as noted earlier, changing global landscapes, and terrorist groups that change names, splinter, or join other groups, may pose problems for researchers. Researchers examining country-level terrorism trajectories have been able to model changes in geographic boundaries over time; however, studies examining terrorist group trends have not yet modeled intergroup mergers or groups that split into independent entities. Future research should focus on how changes in terrorist groups impact subsequent trends of attacks and fatalities. Mergers with other terrorist groups may impact both tactics and strategies for terrorist attacks, especially with regard to overall lethality of attacks.

Future research using LCGA may also benefit from sensitivity testing with other, related approaches for describing long-term trends over time. One prominent critique of LCGA is that it constrains within-class variation, whereas other approaches such as GMM allow for variation within classes. Although Morris and Slocum (2012) compared country-level terrorism trajectories generated from both LCGA and GMM approaches, the extent to which both approaches would provide equivalent classes for terrorist group trajectories is not known. Thus, constraining within-class variability may be problematic for group-based modeling of the development of terrorist group activity over time, especially if the observational period is defined as the life span of the terrorist group and, as such, varies for each terrorist group in the analysis. Terrorist groups classified into the same class may indeed have similar trends. However, we could also argue that there are historical and contextual forces that impact increases or decreases in terrorist group activity, and the patterns extracted may very well change when taking those forces into account. In this case, allowing for within-class variability may be a more accurate representation of the patterns in the data. Other group-based approaches for data reduction and descriptive purposes exist, such as the aforementioned GMM approach as well as GMM approaches that make no parametric assumption about normality within trajectory groups. Sensitivity testing across various group-based modeling approaches is necessary.

Finally, prior LCGA-based terrorism research has primarily focused on estimating unconditional models—that is, models that estimate terrorism trajectories without conditioning on covariates such as population. The unconditional model may not provide the best descriptive portrait of the distribution of terrorism, as compared with a model that does include relevant covariates (Kreuter & Muthén, 2008; Muthén, 2004). Based on prior research using the GTD, variables to condition on include the population size of the country and the region (LaFree et al., 2010), as well as socio-structural variables such as state failure (Fahey & LaFree, 2015).

Conclusion

Much has been learned during the past 20 years about terrorism research in criminology. Until recently, little was known about the global distribution of terrorist activity. The availability of large-scale quantitative datasets and the application of innovative statistical approaches to examining terrorism have greatly enhanced our knowledge of terrorism patterns. Recent studies applying LCGA to the study of terrorism have undoubtedly been useful for describing both worldwide country-level trends in terrorism as well as activity by terrorist groups. Both sets of studies have found evidence for consistently high concentrations of terrorist attacks at both the country and terrorist group level for a small portion of cases. Thus, the potential benefits of LCGA include its ability to summarize complex longitudinal data for countries as well as terrorist groups. However, researchers have been slow to use LCGA-generated results to create country or terrorist group terrorism profiles that may be useful for developing and implementing counterterrorism policies. Therefore, although recent studies of terrorism using LCGA have been informative for providing the descriptive story of terrorism trends, there is potentially still much to be gained from future research that uses LCGA, such as estimating changes in trends over time and identifying those events that are related to changes in terrorism trends.

Notes

1   LCGA can be considered to be a special case of growth mixture models (GMM) in which the variances of the growth parameters are constrained to be zero (Muthén & Asparouhov, 2006). General mixture modeling is a group-based approach that is similar to LCGA. Unlike LCGA, GMM allows individuals within a group to vary around the average group trajectory. This within-class variability in initial starting values and rates of growth is assumed to be normally distributed (Muthén & Asparouhov, 2006).

2   The Poisson and zero-inflated Poisson (ZIP) models allow analysts to model risk for particular events. The ZIP model accounts for the possibility that, although an event may not occur, the risk of the event is still present. Thus, the value reflecting non-occurrence of an event (0) can either reflect a zero risk or positive risk that the event occurs. A common example used to describe intermittency is the observation of symptoms of illness in patients. A patient may not exhibit any symptoms at a specific point in time for two very different reasons: either the patient no longer has the illness, or the patient has the illness but is asymptomatic because the illness is in remission.

3   The BIC is expressed in the following form:

$$BIC = \log(L) - 0.5 * \log(n) * (k),$$

where *L* is the value of the model's maximized likelihood, *n* is the sample size, and *k* is the number of parameters (specifically, groups). One important benefit of the BIC is that it institutes a penalty for increasing the number of groups in the model. Thus, expanding the model by adding groups is only desirable if the resulting improvement in the log likelihood exceeds the penalty for more parameters (Nagin, 2005). Alternatively, one may also use the Lo–Mendell–Rubin likelihood ratio test (LMR-LRT) (Lo et al., 2001) to help with initial model selection (Nylund et al., 2007). This test compares the log likelihood of the estimated model with the log likelihood obtained from the model containing one less class. Significant values indicate that the model being estimated fits the data better than a model estimated with one less class.

4   LaFree et al. (2010) conduct LCGA, excluding and including post-2003 Iraq cases, and, in the case of the latter approach, Iraq is classified into the low/increasing trajectory class.

5   For a review of limitations relevant to micro-level research using LCGA, see Bushway et al., 2009; Eggleston et al., 2004; Feldman et al., 2009; Kreuter & Muthén, 2008.

6   Arguably, some countries may have zero counts because of lack of reporting opportunity or media restrictions.

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Interrupted Time Series Analysis in the Study of Terrorism

Robert Apel and Henda Y. Hsu

Time series analysis is commonly used to evaluate the impact of counterterrorism interventions in the empirical terrorism literature. By conducting a statistical comparison of pre- and post-intervention observations, this type of design is often referred to as an "interrupted time series" (see Shadish et al., 2002). This represents a class of quasi-experimental designs used to evaluate whether an intervention modifies the properties of a time series, typically its mean (i.e., intercept), although possibly also its trend (i.e., slope). Interrupted time series analysis presents many challenges in practice, most notably because time series data violate the assumption of independence—an assumption required for valid statistical inferences concerning the impact of the intervention.

To provide a look ahead, this chapter explores interrupted time series methodology in the study of terrorism interventions. First, we review a number of important terrorism studies employing interrupted time series. These studies provide examples of the diversity and flexibility of time series methodology in the study of terrorism, especially in the evaluation of counterterrorism interventions. Second, we provide statistical details on the standard approaches to interrupted time series analysis, devoting our attention to the Box–Jenkins method, rooted in the autoregressive integrated moving average (ARIMA) model. We also describe the vector autoregression (VAR) model when interest is in estimation of an interruption in more than one time series. Third, we perform an illustrative analysis of the impact of embassy fortifications on quarterly US diplomatic attacks, as well as other forms of terrorism, between 1970 and 1986. We are interested in whether the embassy intervention successfully reduced US diplomatic attacks, but also in whether it resulted in short- or medium-term (i.e., within 10 years) displacement of terrorism to other US and non-US targets, or else yielded a "diffusion of benefits" to attack types that were not the intended target. Finally, we provide a discussion of the implications of the use of interrupted time series analysis for the future study of terrorism.

Review of Some Applications of Interrupted Time Series Analysis in Terrorism Research

A number of terrorism studies employ an ARIMA model, which is commonly used to perform univariate interrupted time series analysis. Other studies rely on the vector autoregression (VAR) or vector error correction (VEC) for multivariate interrupted time series analysis. These models are different generalizations of ARIMA that accommodate the estimation of the effects of one or more interventions on multiple time series. Several examples of each of these approaches will be considered in the following text. Statistical details on these models are reserved for the next section.

Enders and Sandler (1993) employed a VAR model to simultaneously estimate the effectiveness of a variety of counterterrorism interventions—airport metal detectors, US embassy fortifications, US retaliatory bombing of Libya, President Ronald Reagan's get-tough laws on terrorism, etc.—on 15 different time series, consisting of quarterly counts of various attack modes from 1968 to 1988. They found that terrorists substituted into other attacks following the introduction of airport metal detectors (e.g., hostage events) and US embassy fortifications (e.g., assassinations). However, the other counterterrorism interventions had no long-run impacts.

Enders and Sandler (2000) also employed a VAR model to assess whether transnational terrorism became more lethal in response to counterterrorism interventions. The interventions studied were similar to those in their 1993 study—introduction of airport metal detectors (1973), US embassy security enhancements (1976, 1985), and the US retaliatory raid on Libya (1986). The time series were constructed from incidents producing fatalities, injuries, and no casualties. The results suggested that terrorism produced significantly more fatalities and injuries following the introduction of airport metal detectors, but significantly fewer fatalities and injuries following embassy fortifications.

Pridemore, Chamlin, and Trahan (2008) used an ARIMA model to determine whether the Oklahoma City bombing and the 9/11 attacks resulted in changes in the monthly number of homicides. This analysis was conducted to test two competing hypotheses found in the literature about the effects of catastrophes on ensuing interpersonal violence. The authors hypothesized that homicide rates may increase due to post-traumatic stress and the destructive effects of the terrorist attacks on social cohesion. On the other hand, homicides might decrease in the aftermath of terrorism because of the increased solidarity and social cohesion produced by the attacks. Time series of the monthly number of homicides was constructed at the local, state, and national levels, with the latter series included to control for the possibility that changes in local homicide simply mirror regional or national trends. Results indicated that neither hypothesis was supported—there was no change in homicide at either the local, state, or national level.

Enders, Sandler, and Gaibulloev (2011) conducted VAR and VEC analyses of the relationship between domestic and transnational terrorism in their examination of casualties, fatalities, assassinations, bombings, and armed attacks. The results indicated that domestic terrorist incidents "Granger-caused" transnational incidents, while the reverse was not true. In other words, a shock to the domestic terrorism series in prior quarters was positively correlated with the frequency of transnational terrorism in the current quarter. They interpreted this as spillover in response to government (in)action to domestic attacks, concluding that "domestic terrorism cannot be treated as an isolated problem" (p. 335).

Sherrieb and Norris (2013) estimated an ARIMA model for whether the World Trade Center attacks of 2001 or the Madrid train bombings of 2004 had any adverse effects on population health. To test for this, a time series was constructed for the quarterly rate of three birth outcomes—low birth rate, preterm birth rate, and infant mortality rate—in New York City and Madrid, as well as for New York State and Spain, the latter of which were included to rule out broader regional changes and alternative explanations. Results showed a number of adverse effects on population health in both cities following the terrorist attacks.

Hsu and Apel (2015) estimated ARIMA models to analyze the impact of the introduction of airport metal detectors on aviation terrorism (airline hijackings and other aviation-related attacks), as well as the displacement of activity to non-aviation terrorism. The analysis was limited to organizations that had been implicated in aviation terrorism prior to the intervention in 1973, to study whether they shifted their activity with respect to attack mode, target type, or weapon usage once the opportunities for carrying out aviation attacks were restricted. The findings indicated that aviation terrorism (especially hijackings) declined significantly and substantially in response to the intervention. With respect to non-aviation terrorism, which was not the intended target of the intervention, the results suggested a complex mix of displacement—an increase in some forms of attack—as well as "diffusion of benefits"—a decrease in other forms of attack. For example, there was a decline in non-aviation terrorist activity such as assassinations, hostage takings, and attacks against diplomatic targets. This was coupled with an increase in such activities as bombings; infra-structure attacks; attacks against citizens, businesses, and police; and the use of incendi-aries. The findings also suggested that much of this displacement was limited to the relatively few terrorist organizations that were highly organized and capable (e.g., the Irish Republican Army). Furthermore, when displacement did occur, it tended to follow "the path of least resistance"—that is, to other forms of attacks with similar logistical profiles or similar symbolic values.

Statistical Background on Interrupted Time Series Analysis

Box and Jenkins (1970; Box et al., 2008; Box & Tiao, 1975) pioneered the use of the ARIMA model for time series forecasting. The so-called Box–Jenkins method outlines a model building process that is performed in three distinct steps: parameterization, estimation, and validation. In the first step, analysts use an iterative procedure to choose the most appro-priate specification for the "noise model." The goal is to identify the most parsimonious model, from the class of many possible specifications, that best characterizes how the time series unfolds. Identification of the noise model includes consideration of such things as stationarity, seasonality, autocorrelation, and a moving average. Although it is uncommon in practice because of the preponderance of comparatively short time series, it is advanta-geous when the series is sufficiently long if this stage of the analysis can be performed using only the time periods prior to the intervention, since the intervention can conceivably alter the underlying dynamics of the series.

As was alluded in the previous paragraph, parameterization of a noise model requires consideration of stationarity, seasonality, autocorrelation, and a moving average. *Stationarity* describes a series that possesses a constant mean and variance. Non-stationarity can arise when a series closely approximates a "random walk" (i.e., it contains a unit root or near unit

root) or when there is a long-term trend that is unaccounted for—both are instances in which there is no affinity for a fixed mean, which can give rise to spurious intervention effects (McDowall et al., 1980). *Seasonality* refers to periodicity in a series, or fluctuations that arise at uniform time intervals. Seasonal components can be additive or multiplicative, and they routinely arise when the time series is daily, monthly, or quarterly. *Autocorrelation* is the tendency for the current value of a series to be correlated with prior values, in such a way that the strength of the correlation between two values is an exponentially decreasing function of the length of the temporal lag. A *moving average* refers to the tendency for a random shock at one time period to propagate through the series for a fixed number of time periods (McCleary & Hay, 1980).

In the second step of the Box–Jenkins method, analysts estimate the parameters of the chosen model (or set of models) from the first step, specifying a "transfer function" for the intervention. There are many different kinds of transfer functions that can be employed (see McDowall et al., 1980). Typically, counterterrorism interventions are assumed to have an immediate, permanent impact on a series—in this case, the intervention component is represented by a zero-order transfer function, or "step function." More complex transfer functions are also possible, including ones that accommodate a gradual, permanent impact, or an abrupt, temporary impact of the intervention. Specification tests allow the analyst to choose among alternative transfer functions when there is little guidance about its proper form.

In the third and final step of the Box–Jenkins method, analysts confirm that the residuals from the model estimated in the second step are "white noise," meaning they are independent with constant mean and variance. If post-hoc diagnostics suggest that this is not the case, it is important to re-parameterize and then re-estimate the model, necessitating a return to the first step.

To formalize the notation and approach, denote the dependent variable Y_t and the intervention X_t, coded 0 in time periods prior to the intervention and 1 in time periods after the introduction of the intervention. A basic set of interrupted time series models can be represented by the notation "ARIMA(p,d,q)." The p refers to the order of autoregression, the d refers to the order of integration, and the q refers to the order of the moving average. A representative set of ARIMA models can be written as follows:

$$\text{ARIMA}(1,0,0): Y_t = \alpha + \beta X_t + \rho Y_{t-1} + e_t$$

$$\text{ARIMA}(1,0,1): Y_t = \alpha + \beta X_t + \rho Y_{t-1} + e_t + \theta e_{t-1}$$

$$\text{ARIMA}(1,1,1): \Delta Y_t = \alpha + \beta X_t + \rho \Delta Y_{t-1} + \Delta e_t + \theta \Delta e_{t-1}$$

where $\Delta Y_t = Y_t - Y_{t-1}$.

In each of these models, the coefficient of interest is β, quantifying the impact of the intervention on the mean of the series. The coefficients ρ and θ characterize the noise model along with Δ, where ρ is the autoregression coefficient, θ is the moving average coefficient, and Δ is the difference operator indicating that a non-stationary series has undergone first-differencing to render it stationary. Although the noise models shown in the preceding text include only first-order effects, a higher order of any of the ARIMA components is obviously possible.

One scenario in which higher-order components of the noise model would be considered is the presence of seasonality, which refers to periodic tendencies in a time series. Seasonality

frequently arises when data are daily, monthly, or quarterly, and can be modeled either additively or multiplicatively. For example, it is not uncommon for time series to exhibit seasonality in autoregression. Consider a first-order autoregressive model of a quarterly time series, with a seasonal component characterized by a fourth-order autoregression. If the seasonality is additive, the interrupted time series would be represented as follows:

$$Y_t = \alpha + \beta X_t + \rho_1 Y_{t-1} + \rho_4 Y_{t-4} + e_t$$

The model is thus written with AR(1) and AR(4) terms corresponding with their respective lags. The quarterly dependence is captured by ρ_1, whereas the additive seasonal dependence is captured by ρ_4. The normal expectation would be for the seasonal coefficient to be positive (but less than 1.0), indicating that a higher-than-average value of the series in one quarter is followed by a higher-than-average value 1 year later in the same quarter. Alternatively, it could be that the seasonality is multiplicative, in which case the interrupted time series would instead be written as:

$$Y_t = \alpha + \beta X_t + \rho_1 Y_{t-1} + \rho_{4,1} Y_{t-4} - \rho_1 \rho_{4,1} Y_{t-5} + e_t$$

What makes this model multiplicative is the constraint implied on the fifth-order lag, although only ρ_1 and $\rho_{4,1}$ need actually be estimated. This formulation is technically known as a seasonal ARIMA (or SARIMA) model. Although seasonal autoregression is described here, it would be a trivial matter to accommodate additive or multiplicative moving averages.

Shortcomings of the ARIMA Model

The Box–Jenkins method described in the preceding text is designed to overcome the lack of independence of time series observations, which can distort tests of statistical significance. By directly addressing potential problems with non-stationarity, seasonality, autocorrelation, and a moving average, the ARIMA model yields residuals that have the appealing properties of constant mean and constant variance.

As with any quasi-experimental design, an interrupted time series analysis still faces a variety of other threats to validity that can undermine inference (see Shadish et al., 2002). The main inferential threats derive from non-intervention factors which correspond closely to the introduction of the intervention. The most salient of these is *history*, which refers to the possibility that some other event occurred at about the same time as the intervention, and it was this event rather than the intervention that actually altered the series. This can be especially problematic in a time series with long reference windows (e.g., yearly data as opposed to daily data).

A solution to the problems posed by history is the analysis of one or more comparison time series, or what are known as "non-equivalent dependent variables" (Shadish et al., 2002). For example, analysts might include several time series that the intervention might plausibly have affected, or else one or more time series that the intervention should not have affected. Each such series might be analyzed in a set of independent ARIMA models, or else analyzed jointly in a VAR model (considered in the next section). Analysts might also decompose a time series into constituent components defined on the basis of subsets or

subgroups. As comparison time series are added to the analysis, and a consistent and expected pattern of results identified, historical threats become less consequential. Although an interrupted time series analysis will never completely eliminate historical artifacts, a well-designed study is certainly capable of ruling out many historical artifacts.

VAR Model

The previous section devoted attention to the univariate ARIMA model for the analysis of interrupted time series, using the Box–Jenkins method. When there is more than one dependent series, however, an alternative approach is to model intervention effects simultaneously within a VAR model (Sims, 1980; Stock & Watson, 2001). This model represents a generalization of time series analysis to a multivariate setting, referring to a setting with multiple dependent variables. In VAR, each series is explained by a model that conditions on its own lags in addition to the lags of all of the other series in the system. This technically makes the VAR model a "seemingly unrelated regression" (SUR) model (Zellner, 1962, 1963).

   A VAR(p) model is defined by p, the order of autocorrelation. To provide a basic example, the parameterization of a VAR(1) model is as follows:

$$Y_{k,t} = \alpha_k + \sum_{k=1}^{K} \rho_k Y_{k,t-1} + e_{k,t}$$

In this model, $t = 1,\ldots,T$ indexes time (e.g., quarters) and $k = 1,\ldots,K$ indexes series (outcomes). In this simplest specification, each series is modeled as a function of $K + 1$ unknown parameters—a constant and the lagged value of each series, including the referent series.

   The basic VAR model can be expanded in several key ways that are relevant for interrupted time series analysis: any of the time series can be differenced to achieve stationarity; higher-order lags of each series can be included based on specification tests; and an exogenous intervention can be introduced. Incorporating these additional elements, the parameterization of a VAR(p) model with an exogenous variable therefore becomes:

$$Y_{k,t} = \alpha_k + \beta_k X_t + \sum_{k=1}^{K}\sum_{p=1}^{P} \rho_k^p Y_{k,t-p} + e_{k,t}$$

Here, $p = 1,\ldots,P$ indexes lag lengths, and X_t is a dummy variable for the intervention. Note that the order of the lags can differ for each series, and one or more of the series may be differenced to achieve stationarity. The slope for the intervention is indexed by k, meaning that there are K intervention coefficients—one for each time series in the system. To make this more concrete, suppose an analyst is performing interrupted time series analysis with a system of three dependent variables (i.e., $k = 3$). Assuming a VAR(1) specification, the system may be represented as follows:

$$Y_{k,t} = \begin{cases} \alpha_1 + \beta_1 X_t + \rho_{1,1} Y_{1,t-1} + \rho_{1,2} Y_{2,t-1} + \rho_{1,3} Y_{3,t-1} + e_{1,t} \\ \alpha_2 + \beta_2 X_t + \rho_{2,1} Y_{1,t-1} + \rho_{2,2} Y_{2,t-1} + \rho_{2,3} Y_{3,t-1} + e_{2,t} \\ \alpha_3 + \beta_3 X_t + \rho_{3,1} Y_{1,t-1} + \rho_{3,2} Y_{2,t-1} + \rho_{3,3} Y_{3,t-1} + e_{3,t} \end{cases}$$

Thus, there are 15 parameters that would require estimation in a VAR(1) model with three companion series and one intervention. Note that the analysis can also be expanded to include a moving average if necessary, which would technically make it a VARMA(p,q) model.

One distinct advantage of a VAR model is the joint estimation of the impact of the intervention on all series in the system, controlling for the dynamics of all of the series. A second distinct advantage is that the series lags allow for testing of possible spillover and substitution between two or more series. Evidence of such effects would imply that two or more series exhibit shared susceptibility to larger social forces. For example, spillover would be evident when a positive shock to one series in the last period is followed by an increase in another series in the current period (or when a negative shock to one series is followed by a decrease in another series). Substitution is observed when a negative shock to one series in the last period is followed by an increase in another series in the current period (or when a positive shock to one series is followed by a decrease in another series). Note that the shocks need not be symmetrical.

Impact of Embassy Fortifications on US Diplomatic Attacks

To provide an empirical illustration of interrupted time series analysis, we will consider the impact of US embassy fortifications on the frequency of attacks against US diplomatic and other targets in the 1970s and 1980s (for a more thorough treatment, see Hsu, 2011). Along with airport metal detectors, terrorism researchers have long contended that the introduction of US embassy fortifications resulted in terrorists switching to other kinds of attacks (Enders & Sandler, 1993, 2012). Despite skepticism about the effectiveness of defensive or situational counterterrorism security measures that aim to reduce the opportunities for terrorists to carry out attacks, criminological researchers have argued that displacement of terrorist attacks is not a foregone conclusion. In light of this debate, and to build upon our previous examination of terrorism displacement in response to airport metal detectors (Hsu & Apel, 2015), for the purpose of illustration, we perform an interrupted time series analysis of the impact of US embassy fortifications, particularly on ensuing shifts to other kinds of attacks.

To start, we obtained quarterly data on the number of attacks against US diplomatic and other entities from the August 2014 version of the Global Terrorism Database (GTD), which is an unclassified open-source, event-level database that lists incidents of domestic and international terrorism between 1970 and 2013 (see LaFree, Dugan, & Miller, 2015). Compared with most other major databases, GTD utilizes a more comprehensive and inclusive definition of terrorism. For example, neither the US State Department's nor the Federal Bureau of Investigation's definition of terrorism includes threats of force. This can be problematic because many terrorism incidents involve only the threatened use of force, and hence adoption of a non-inclusive definition risks distorting the extent and nature of the effects of counterterrorism interventions. In the same vein, much research on terrorism adopts definitions that are limited to political purposes, and thus excludes attacks that are motivated by religious, economic, or social goals. GTD defines terrorism broadly as the threatened or actual use of illegal force and violence by non-state actors to attain a political, economic, religious, or social goal through fear, coercion, or intimidation.

Each incident included in GTD is classified by the target entity, referring to the type of organization or interest group that was targeted by the attack. For the present analysis, our

interest is in entities labeled "US Diplomat," with secondary interest in other US entities, namely "US Police/Military" and "US Business," as well as non-US entities including "Diplomat," "Police/Military," and the sum of "Foreign Business" and "Domestic Business." Note that the latter two kinds of events are pooled together in this analysis. All incidents in GTD between 1970 and 1986 targeting one of these entities are summed by quarter. The analysis is limited to the 1970–1986 time period (rather than the full 1970–2013 time period) to evaluate the impact of embassy fortifications on short- and medium-term terrorism responses, as well as to eliminate the need to model additional embassy interventions that were implemented beginning in the mid-1980s. Namely, we are interested in whether the intervention resulted in displacement of US diplomatic attacks to other forms of terrorism, as well as whether the intervention resulted in a diffusion of benefits to other forms of terrorism.

Beginning in October 1976, spending on security more than doubled in an effort to fortify and secure US embassies (see Enders & Sandler, 1993, 2000, 2006). The analysis is guided first and foremost by the following question: Did embassy fortifications directly impact the frequency of terrorist attacks against US diplomatic entities? An additional set of analyses is guided by the following second-order question: Did embassy fortifications increase or decrease the frequency of attacks targeted at entities other than US diplomatic ones? The analyses that follow are therefore concerned with whether the embassy intervention successfully reduced the intended form of terrorism, followed by whether it led to unintended displacement or diffusion of benefits to other forms of terrorism.

For the purpose of this analysis, the intervention is operationalized as follows:

$$Embassy_t = \begin{cases} 0 & 1970\text{-Q1} \leq t \leq 1976\text{-Q3} \\ 1 & 1976\text{-Q4} \leq t \leq 1986\text{-Q4} \end{cases}$$

where t references the quarter. In the analysis, an "immediate, permanent" impact of embassy fortifications will be estimated. However, alternative transfer functions will also be considered and commented on at relevant points.

ARIMA Model for US Diplomatic Attacks

Figure 18.1 shows the distribution of US diplomatic attacks. Between 1970 and 1986, there was an average of 3.66 attacks per quarter. The comparatively low counts and the long right tail of the distribution (evidence of right skew) suggests that we should also consider estimating a count model in addition to the normal-error ARIMA model, in order to test the sensitivity of the impact estimate.

Figure 18.2 displays the time series of the quarterly number of US diplomatic attacks from 1970 to 1986. On average, there are 1.18 fewer diplomatic attacks per quarter following the investments in embassy security ($t = -1.78$; two-tailed $p < 0.08$). While the estimate of the difference in pre- and post-intervention means is statistically valid, any inferential statements are invalid until a proper noise model has been estimated and the intervention has been modeled. We first employ the Box–Jenkins method to do so in the text that follows.

The first consideration in the specification of the noise model is stationarity of the series—in other words, the order of integration of the model, or the d of ARIMA(p,d,q). We can employ the Dickey–Fuller test as one method of ascertaining whether the series has a unit root or near-unit root (Dickey & Fuller, 1979), which would require differencing to
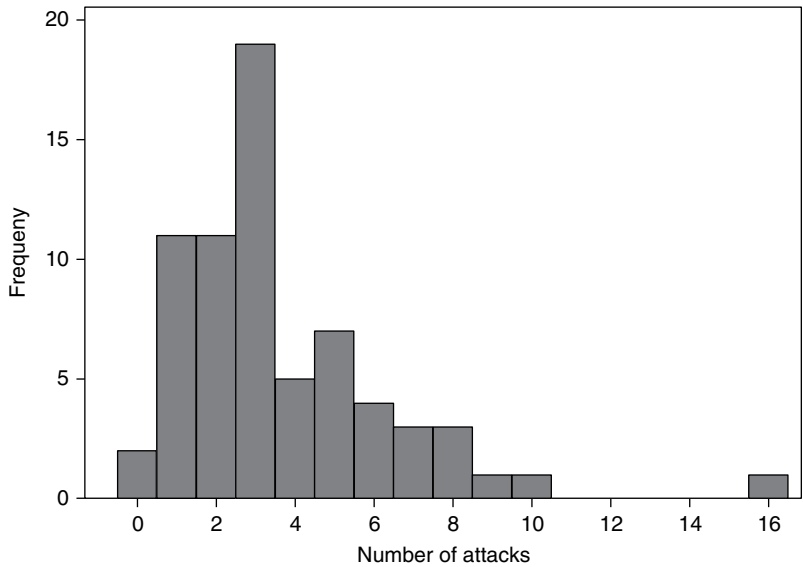
Figure 18.1   Distribution of Quarterly Attacks Targeting US Diplomatic Entities, 1970–1986
Note: The mean of the distribution is 3.66 (SD = 2.70), with a median of 3.
Source: Global Terrorism Database
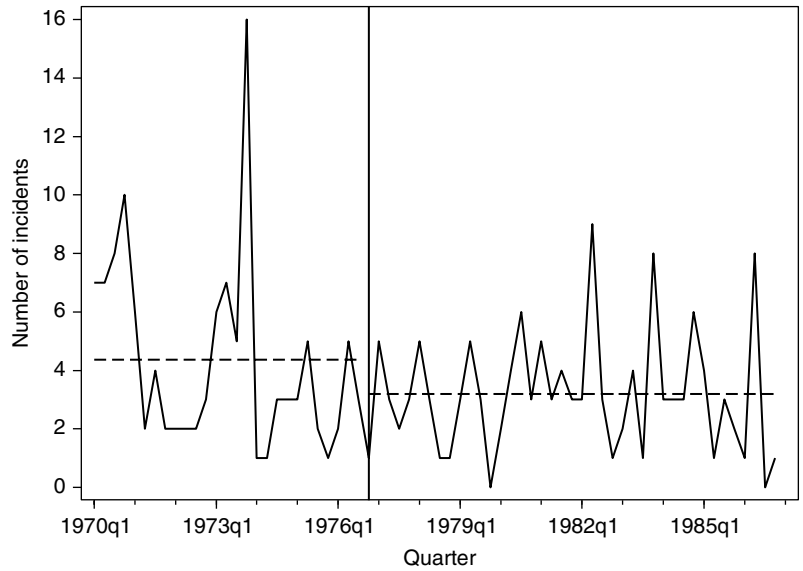
Figure 18.2   Quarterly Time Series of Attacks Targeting US Diplomatic Entities, 1970–1986
Note: $T_{Pre} = 27$; $T_{Post} = 41$. The pre-intervention mean is 4.37 (SD = 3.34), whereas the post-intervention mean is 3.20 (SD = 2.10). An independent-samples t-test yields $t = -1.78$ ($p < 0.08$, two tails).
Source: Global Terrorism Database

render it stationary. The test amounts to estimating a regression model of ΔY_t on Y_{t-1}, with the test yielded by the coefficient on Y_{t-1} (although a modified p-value for the lag must be used). The null hypothesis of this test is that the series contains a unit root. The US diplomatic attack series yields a statistic of –7.42, which strongly rejects the null hypothesis and confirms visual evidence from Figure 18.1 that the series is indeed stationary.

The second consideration in the specification of the noise model is the order of the error components—specifically, the presence of autocorrelation and/or a moving average in the series. This determination can be made from inspection of the autocorrelation function (ACF) and partial autocorrelation function (PACF). A time series that is ARIMA(p,0,0) would be indicated by an ACF that is statistically significant at the first lag but decays exponentially to 0, along with a PACF exhibiting a spike at the first p lags, beyond which the PACF does not differ from 0. On the other hand, a time series that is ARIMA(0,0,q) would be indicated by an ACF with a spike at the first q lags, beyond which the ACF does not differ from 0. The ACF and PACF of the diplomatic attack series are shown in Figure 18.3. No estimate of the ACF lies outside of the 95% confidence bands, indicating that the series is not plagued by either autocorrelation or a moving average. As an aside, the ACF also confirms that the diplomatic attack series is stationary, since non-stationarity would be indicated by an ACF that is statistically significant at many lags beyond the first but decays very slowly (compared with the exponential decay of an autoregressive process).

The foregoing determinations indicate that the noise model for the diplomatic attack series can be characterized as ARIMA(0,0,0), which would lead to a standard regression model for estimation of the impact of embassy fortifications. Using *Diplomatic$_i$* to represent the frequency of US diplomatic attacks and the dummy variable *Embassy$_i$* to represent US investments in embassy security beginning in the fourth quarter of 1976, the model specification is as follows:

$$Diplomatic_t = \alpha + \beta \, Embassy_t + e_t$$

The success (or lack thereof) of the intervention is judged by the coefficient and p-value on the embassy fortification dummy variable. As a supplement to statistical inference concerning the intervention, it is also good practice to provide a measure of the effect size of the intervention (see Cohen, 1988). For example, Cohen's d can be estimated by a ratio of the impact estimate from the ARIMA model to the pooled standard deviation of the outcome series for pre- and post-intervention time periods:

$$d = \breve{\beta} \times \frac{1}{\sqrt{\dfrac{(T_{Pre}-1)\cdot S_{Y_{Pre}}^2 + (T_{Post}-1)\cdot S_{Y_{Post}}^2}{T_{Pre}+T_{Post}-2}}}$$

The effect size can be used to judge the substantive significance of the impact estimate, apart from its statistical significance. For example, a statistically significant impact estimate might be of little practical consequence, given a small effect size. On the other hand, a statistically non-significant impact estimate might be highly consequential because of a medium-to-large effect size. Where d is concerned, an effect size of less than 0.2 is generally considered to be "small," whereas an effect size in the neighborhood of 0.5 is considered "medium," and 0.8 would be considered "large" (Cohen, 1988).
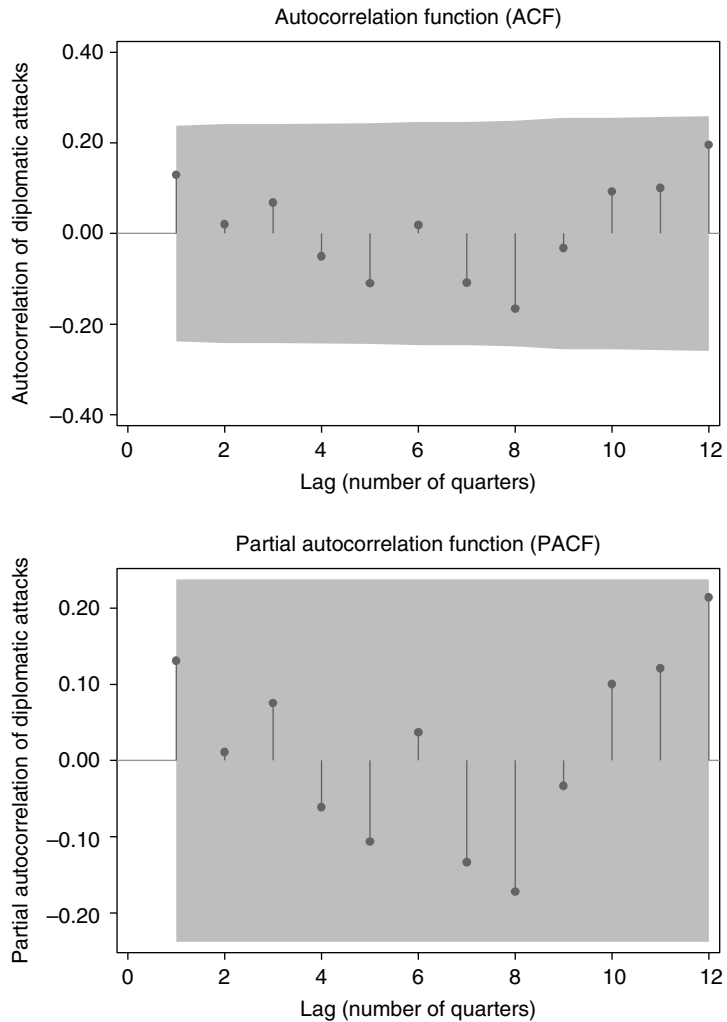
Figure 18.3 Autocorrelation and Partial Autocorrelation Functions of Diplomatic Attack Series
Note: The shaded bands represent 95% confidence intervals for the autocorrelation and partial autocorrelation coefficients.

We are now ready to proceed with estimation of the impact model, the second step in the Box–Jenkins method. Estimates from two distinct specifications—a normal-error model (linear regression) and an event count model (negative binomial regression)—are shown in Table 18.1. The first column of coefficients is from the linear regression model, which yields an impact estimate of $b = -1.18$, which is statistically significant at a 10% level. The effect size for this impact is $d = -0.39$, which implies an effect that is intermediate between "small" and "medium" (see Cohen, 1988). The second column of coefficients is from the negative binomial regression model, with an impact estimate of $b = -0.31$, which is also statistically significant at a 10% level. This coefficient implies a 27% reduction in the quarterly rate of diplomatic attacks following introduction of embassy fortifications ($e^{-0.31} - 1 = 0.73 - 1 = -0.27$).

Table 18.1 Intervention Effect of Embassy Fortifications on Attacks against US Diplomatic Targets

Variable	Model 1: Linear Regression Coeff. (Std. Err.)	Model 2: Negative Binomial Coeff. (Std. Err.)
Intercept	4.37 (0.64)***	1.47 (0.15)***
Embassy Fortifications	−1.18 (0.71)[+]	−0.31 (0.18)[+]

Note: $T_{Pre} = 27$; $T_{Post} = 41$. The noise model for Model 1 is ARIMA(0,0,0). Robust standard errors are provided.
[+] $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (two-tailed tests).

To complete the third and final step of the Box–Jenkins method, we confirmed from an inspection of the ACF that the residuals from the model shown in Table 18.1 (Model 1) were indeed white noise. We therefore conclude that security enhancements intended to fortify US embassies beginning in 1976 did indeed reduce the frequency of terrorist attacks against US diplomatic assets. In other words, the embassy intervention had the intended effect. Furthermore, the effect size indicates that the impact of the intervention was substantively meaningful. In analyses that are not shown, we also considered the possibility that the intervention was of a more complex form, specifically, that it had an "abrupt, temporary" impact as well as a "gradual, permanent" impact. In both cases, the additional terms did not significantly improve the fit of the model.

ARIMA Models for Other Terrorist Attack Types

We also perform an interrupted time series analysis of terrorist attacks against entities other than US diplomatic ones. These "non-equivalent dependent variables" are included to ensure that the impact of embassy fortifications on US diplomatic attacks is not confounded with other contemporaneous events (see Shadish et al., 2002). They also allow a consideration of unintended effects of the embassy intervention, for example, via displacement or diffusion of benefits. The comparison series include other forms of attack against US targets with broad international presence (military, business) as well as attacks against non-US targets (diplomatic, military, business).

Figure 18.4 provides the time series for the five non-equivalent dependent variables, along with US diplomatic attacks for comparative purposes. The corresponding ACFs for all of the series are provided in Figure 18.5 (the PACFs are not shown), which are used to perform separate diagnoses for the specification of the ARIMA noise models for the comparison series.

The ARIMA results are provided in Table 18.2, in which the first row, for comparative purposes, reproduces the impact estimate for attacks against US diplomatic targets. Interestingly, the results indicate that US embassy fortification was associated with a decline in all three forms of attacks against US interests (first three rows of coefficients in Table 18.2). Although the impact estimate is only marginally significant in two of the three models, the effect sizes are nevertheless substantial and exceed what would be universally regarded as a weak intervention (i.e., $|d| > 0.2$), and in two instances are equal to or larger than 0.5. Had embassy fortifications displaced terrorism to US non-diplomatic entities, we would have expected to observe an increase in the frequency of attacks against the US military or against US businesses. Instead, there is an apparent "diffusion of benefits" of the intervention with respect to terrorist targeting of US interests.
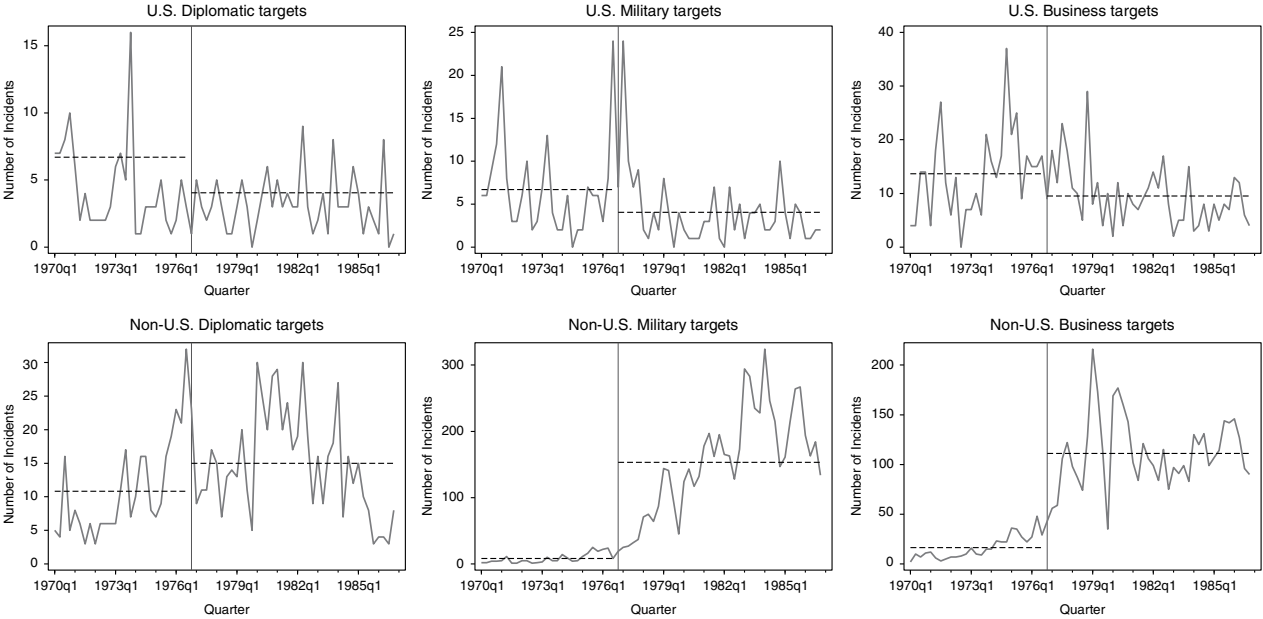
Figure 18.4   Comparison Time Series, 1970–1986

Note: $T_{Pre} = 27$; $T_{Post} = 41$.

Source: Global Terrorism Database
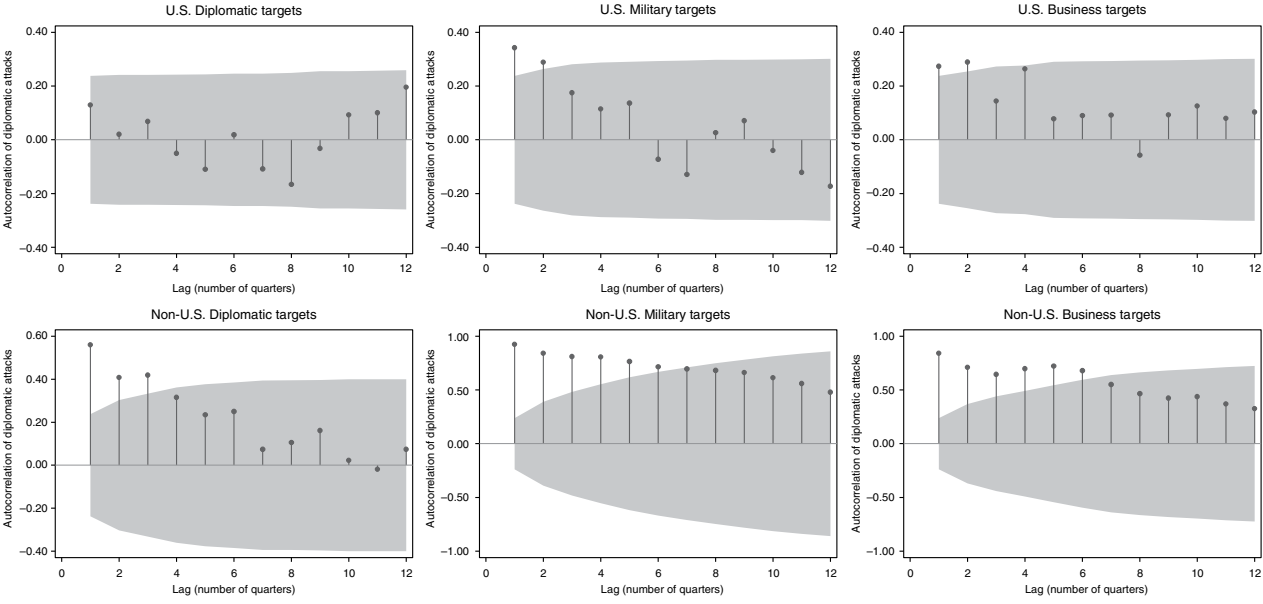
Figure 18.5 Comparison Autocorrelation Functions, 1970–1986
Note: The shaded bands represent 95% confidence intervals for the autocorrelation coefficients.

Table 18.2   Comparative Intervention Effects of Embassy Fortifications (ARIMA Models)

		Embassy Fortifications	
Dependent Series	ARIMA Specification	Coeff. (Std. Err.)	|d|
(1) US Diplomatic Targets	(0,0,0)	−1.18 (0.71)[+]	0.39
(2) US Military Targets	(1,0,0)	−3.27 (1.81)[+]	0.61
(3) US Business Targets	(1,0,1)	−3.81 (2.96)	0.50
(4) Non-US Diplomatic Targets	(1,0,0)	2.58 (3.28)	0.30
(5) Non-US Military Targets	(0,1,2)	3.28 (3.21)	0.05
(6) Non-US Business Targets	(1,1,4)[a]	5.44 (4.60)	0.16

Note: $T_{Pre} = 27$; $T_{Post} = 41$. Robust standard errors are provided. The column headed by d provides Cohen's d, an estimate of effect size (0.2 = "small"; 0.5 = "medium"; 0.8 = "large").
[a] The moving average component is seasonal additive, with MA(1) and MA(4).
[+] $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (two-tailed tests).

The findings with respect to terrorist attacks against non-US interests yield entirely differ-ent conclusions (last three rows of coefficients in Table 18.2). The frequency of all three forms of non-US attacks increased following US embassy fortification, although no coefficient is statistically significant. The effect size for non-US diplomatic attacks is intermediate between small and medium, whereas the unremarkable effect sizes for the two remaining non-US targets indicate no detectable change, statistically or substantively. This seems to suggest that enhanced US embassy security mildly displaced some terrorist activity to non-US diplomatic entities as a response to reduced opportunities to attack US diplomatic entities.

VAR Model for All Terrorist Attack Types

The impact estimates from a VAR(1) model are provided in Table 18.3. Recall that, in this model, all intervention effects are estimated jointly, and, since $p = 1$, the first lagged values of all six series are included in all of the series equations. This model allows simultaneous consideration of the impact of the embassy intervention on US diplomatic attacks; the impact of the embassy intervention on displacement or diffusion to other attack types; and spillover or substation between different attack types.

One notable result is that the impact estimates for US target types are similar in magni-tude to those reported in Table 18.2, with effect sizes in the neighborhood of 0.50. On the other hand, the impact estimates for the three non-US target types are not even remotely statistically significant, nor are they notable for their effect sizes. This represents a modest departure from the univariate results reported in Table 18.2, wherein the impact estimate for non-US diplomatic attacks was positive and in the small-to-medium range (although not statistically significant). Thus, the VAR model indicates that embassy fortifications sig-nificantly reduced the targeted form of terrorism (US diplomatic entities), and exhibited a diffusion of benefits to other US entities (US military, US businesses) with no apparent displacement to non-US entities.

Although the coefficients on the lags are not shown in Table 18.3, there is some evidence of spillover as well as substitution between different forms of terrorist activity. For example, the frequency of non-US diplomatic attacks in the previous quarter is positively correlated with the frequency of US diplomatic attacks in the current quarter ($b = 0.08$; *s.e.* = 0.04;

Table 18.3   Comparative Intervention Effects of Embassy Fortifications (VAR Model)

	Embassy Fortifications	
Dependent Series	*Coeff. (Std. Err.)*	*|d|*
(1) US Diplomatic Targets	−1.60 (0.70)*	0.53
(2) US Military Targets	−2.35 (1.29)+	0.44
(3) US Business Targets	−5.42 (1.78)**	0.71
(4) Non-US Diplomatic Targets	0.58 (1.78)	0.07
(5) Non-US Military Targets	7.99 (9.75)	0.11
(6) Non-US Business Targets	5.13 (8.20)	0.15

Note: The model is VAR(1). The intercept and the coefficients for the lags are not shown. The series for non-US military targets and non-US business targets are differenced. The column headed by d provides Cohen's d, an estimate of effect size (0.2 = "small"; 0.5 = "medium"; 0.8 = "large").
+ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (two-tailed tests).

$p < 0.10$), even while controlling for prior US diplomatic attacks and embassy fortifications. This implies a modest degree of spillover from non-US diplomatic attacks to US diplomatic attacks. In other words, a spike in non-US diplomatic attacks is followed closely in time by a spike in US diplomatic attacks.

Other forms of spillover include from non-US business attacks to US diplomatic attacks ($b = 0.02$; *s.e.* = 0.01; $p < 0.10$), and from US business attacks to non-US business attacks ($b = 1.06$; *s.e.* = 0.54). On the other hand, US business attacks in the previous quarter are negatively correlated with US diplomatic attacks in the current quarter ($b = -0.08$; *s.e.* = 0.05; $p < 0.10$), as are US military attacks with US diplomatic attacks ($b = -0.02$; *s.e.* = 0.01; $p < 0.10$), providing the only evidence of substitution in the model. This is to say that, over and above the impact of the embassy intervention, there is a mild tendency for US diplomatic attacks to be a substitute for military and business attacks against US targets.

The results from the VAR model therefore suggest that the introduction of US embassy fortifications reduced the frequency of the intended form of terrorism, while yielding a diffusion of benefits to other forms of terrorism with no apparent displacement, at least for the attack types considered here. However, we should caution that, while our description of the results implies a modification of terrorist behavior and intent in response to US embassy fortifications, this should not necessarily be taken literally. Descriptions of displacement and diffusion of benefits can leave the impression that a terrorist group changed its mode of attack as the opportunity structure changed for carrying out those attacks. While this might be true, in fact, because our analysis uses data on terrorism events rather than on individual terrorists or terrorist groups, we are ultimately unable to speak directly to this issue with the data at hand. However, Hsu and Apel (2015) provide a recent example of efforts to study the behavior of terrorist groups in response to a different counterterrorism intervention, finding a complex mix of displacement and diffusion of benefits.

Concluding Remarks

This chapter has explored the use of interrupted time series in the study of counterterrorism interventions, including a review of prior research as well as a discussion of the basic statistical considerations for this type of analysis. The ARIMA model was described for

univariate analysis, while the VAR model was described for multivariate analysis. Both models were utilized in an empirical assessment of the impact of the introduction of US embassy fortifications in October 1976 on US diplomatic and other attacks, demonstrating the flexibility and broad appeal that interrupted time series analysis potentially holds for terrorism researchers. Although the demonstration was intended to be illustrative, it provides the foundation for more in-depth analysis.

Our conceptual approach was informed by situational crime prevention, which provides a formal framework for considering the intended and unintended consequences of counter-terrorism interventions. We view this as an important avenue for future terrorism research and policy, and view interrupted time series methodology as being particularly well suited to the task. The benefits include such considerations as displacement versus diffusion of benefits in response to defensive counterterrorism, in addition to spillover versus substitution between different forms of terrorist activity.

While our empirical examination focused on short- or medium-term responses to US embassy fortifications, interrupted time series analysis also has the capacity to evaluate more long-term adaptations to counterterrorism interventions. In other words, while embassy fortifications might be successful in the short run, long-run adaptation might be possible with a shift in the technology employed by terrorist groups (e.g., a shift from the use of firearms to explosives or other more deadly weapons). With a longer time series and a more complex transfer function, researchers can study these processes empirically. For example, the analysis in this chapter relied on a zero-order transfer function (to study the immediate, permanent impact), but a first-order transfer function might be adopted in future analyses. This would allow consideration of immediate versus gradual effects, as well as temporary versus permanent effects, by modeling both the impact and the rate of change associated with an intervention.

Impact analysis is also not strictly concerned with counterterrorism security efforts. For quasi-experiment purposes, an intervention is any discrete event or, simply, "something that happens" (McDowall et al., 1980:64). This general premise affords researchers the opportunity to utilize interrupted time series analysis to model a wide range of government responses as opposed to strictly terrorism responses. Underscoring the importance of understanding the impact of responses to terrorism, Dugan and Chenoweth (2012) recently found that conciliatory actions by governments (e.g., signing peace accords, releasing prisoners, and lifting curfews) can be more effective in reducing future terrorist attacks than punishment-based or repressive counterterrorism measures. Given the dearth of scholarly attention paid to evaluating counterterrorism interventions (Lum, Kennedy, & Sherley, 2006), there is a need for the use of interrupted time series analysis to conduct proper assessments of manifold solutions to terrorism.

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Part V
Types of Terrorism

Far Right Terrorism in the United States

Pete Simi and Bryan F. Bubolz

Since the growth of terrorist movements and organizations in the Middle East during the 1980s and 1990s, and especially following the 9/11 attack, the term "terrorism" has become synonymous with Islamic radicalism. The conflation of terrorism and Islam has a number of serious consequences. Among these consequences is a type of amnesia or blind spot regarding other types of terrorism. This type of oversight prevents a more sophisticated theoretical understanding of terrorism and also undermines prevention and intervention strategies. Most importantly, ignoring other types of terrorism helps perpetuate anti-Muslim stereotypes (Simi, 2010).

Despite the almost laser beam focus on jihadi extremists, right-wing terrorism (RWT) represents the oldest and most persistent form of terrorism in the United States (Michael, 2014; Newton & Newton, 1991; Trelease, 1971). In this chapter, we discuss US RWT focusing on the history of this type of violence and the different sectors that constitute the Far Right. We define the Far Right as a network or constellation of groups (some formal and some informal) that espouse a combination of anti-government, racist, anti-Semitic, homophobic, anti-abortion, and anti-immigrant beliefs (LaFree & Dugan, 2007). The far or extreme right has been described as having a "belief in the intrinsic superiority of their own race or national group and the need to make their own race or national group superior over other groups … and a belief in the necessity and desirability of war as a means of realising national or racial destiny" (Wilkinson quoted in Smith, 1994, p. 35). Specific types of right-wing extremist groups include the Ku Klux Klan (KKK), Christian Identity sects, neo-Nazis, racist skinheads, anti-government militias, and sovereign citizens. Right-wing extremists utilize a variety of legal tactics—including forming political parties, organizing public marches and rallies, creating and distributing extremist literature, and developing separatist communities—and illegal activities, such as bombing abortion clinics, violent attacks on "out-group" members, bank robbery, drug distribution, identity theft, counterfeiting, and tax evasion (see Berlet & Lyons, 2000; Diamond, 1995; Freilich & Chermak, 2009; Hamm 2001; McCurrie, 1998; Smith, 1994; Weinberg, 1998). *Terrorism* refers to a

type of ideologically motivated violence that arises during asymmetrical conflict and is designed to have far-reaching psychological repercussions beyond the immediate target (Hoffman, 2006). As noted elsewhere (Bjorgo, 1995), while most terrorists are extremists, most extremists never engage in terrorism. Extremism, however, typically generates the ideological and organizational potential for the execution of terror attacks. We begin by explaining the different types of right-wing extremists and their core ideological tenets.

Types of Right-Wing Extremists

This chapter focuses on US white supremacist groups (i.e., the extreme of the extreme). While there are militia groups that are primarily anti-government and not necessarily racist or anti-Semitic, there are also many organizational and ideological overlaps between anti-government militias and white supremacists (see Abanes, 1996). Because of the prominence of white supremacists in terms of their involvement in terrorism, we spend more time focusing on this sector of the Far Right. We consider white supremacists as constituting an overlapping web of movements that include various KKKs, neo-Nazis, Christian Identity ideologists, racist neo-Pagan believers, and racist skinheads.[1] While some ideological and stylistic differences exist across these movement networks, members also agree on some basic doctrines. First and foremost, white supremacists imagine that they are part of an innately superior biogenetic race (i.e., "master race") that is under attack by race-mixing and intercultural exchange. White supremacists see themselves as victims of a world that both fails to acknowledge their natural superiority and also suppresses and destroys all things "Aryan" (Berbrier, 2000; Blee, 2002). White supremacists unite around genocidal fantasies against Jews, blacks, Hispanics, gays, and anyone else opposed to white power. They desire a racially exclusive world where non-whites and other sub-humans are vanquished, segregated, or at least subordinated to Aryan authority. They idealize conservative traditional male-dominant heterosexual families, loathe homosexuality; and detest inter-racial sex, marriage, and procreation (Simi & Futrell, 2010).

Early Terror in America

The KKK, one of the oldest terror groups in the United States, originated during the winter of 1865–1866 in Pulaski, in Tennessee (Chalmers, 1965). The Klan was formed by former confederate officers who were seeking to build a fraternal organization that would provide social ties and a sense of belonging. These types of social motivations are common among groups that eventually transition into terrorism. Shortly after forming, the Klan and dozens of other similar white supremacist vigilante groups (e.g., White Knights of Camellia; Constitutional Union Guard) began to rely on a variety of terror tactics, including political assassination, to wage a guerilla war to fight against Reconstruction Era policies aimed at altering the system of white supremacy that defined the confederacy. Prior to the 1868 presidential election, white supremacist groups assassinated nearly 2,000 potential Republican voters in Kansas and Georgia, while 1,000 individuals associated with Reconstruction policies were murdered in Louisiana to prevent black enfranchisement. The guerillas were partly successful as Reconstruction was prematurely ended in 1877 and replaced by a slightly altered system of slavery known as "sharecropping" and a severe system of racial segregation (Chalmers, 1965; Gage, 2011; Trelease, 1971).

A variety of factors led to a major reduction in Klan activities, but by the 1920s a second era of Klan activity emerged. The 1920s Klan expanded their targets to include "non-Anglo-Saxon" immigrants, Catholics, and Jews. By 1925, the Klan's membership soared to 3–5 million followers nationwide, with strongholds across the West, Midwest, and Northeast, as well as in the states of the former confederacy (Blee, 1991; McVeigh, 2009).

In the first two decades of the twentieth century, terroristic violence inspired by the white supremacist ideology grew rapidly. Early-twentieth-century postcards celebrated black lynchings with photos of hanged and sometime charred bodies of murdered African Americans. White-supremacist-inspired lynchings were justified as necessary to protect white women and rein in blacks with too much freedom (Newton & Newton, 1991). In fact, some Klan members such as Alma White, who was particularly influential during the 1920s and 1930s, argued that Catholics, Jews, and African Americans threatened existing standards of morality by promoting degeneracy and the subordination of women (Blee, 1991). During this period, communities known as "sundown towns" used violence or the threat of violence to keep African Americans out of town after sunset (Blee, 1991; Loewen, 2005). For instance, in Sullivan's Hollow in Mississippi, residents caught an African American individual walking about town in violation of the curfew. His punishment for this offense was to crawl a mile on his hands and knees with a bundle of barbed wire tied to his back (Loewen, 2005). Other African Americans caught in violation of the sundown rule were beaten and murdered by mobs of angry white residents (Loewen, 2005). Although not exclusive to members of the KKK, individuals who belonged to the Klan had a particularly strong presence and influence in sundown towns across the United States (Loewen, 2005). A few notorious KKK leaders such as Wilbur Phelps, who in 1911 founded *The Menace*, an anti-Catholic newspaper, lived in the sundown town of Aurora in Missouri. His messages against Catholicism were received by a broad audience as his newspaper had a circulation of 1,000,000 in 1914 (Loewen, 2005). Additionally, Klan leaders used these towns as recruiting centers for their organizations of terror because they found sympathizers who also desired an all-white lifestyle (Loewen, 2005).

RWT in the mid-twentieth century focused on maintaining America's version of racial apartheid. This type of terroristic violence was especially prominent as the Civil Rights Movement began gaining momentum and threatened to unhinge the racial caste system in place across the south (Chalmers, 1965; Cunningham, 2005, 2014). During the 1950s and 1960s, various Klans waged active terror campaigns to enforce Jim Crow and resist the Civil Rights Movement. For example, in 1963, a terror cell comprised of members from the United Klans of America bombed the 16th Street Baptist Church in Birmingham, Alabama, killing four children attending a Sunday service (Kushner, 2003). The 1963 bombing was the culmination of a terror campaign that lasted more than 20 years in Birmingham (the city was known as "Bombingham"). In the 20 years prior to the 1963 bombing of the 16th Street Baptist church, black Birmingham businesses and residences were targeted with more than 48 unresolved "racial bombings" (Kushner 2003).

Terror Cells in the 1980s

Compared with the 1950s and 1960s, when various Klan groups routinely initiated violent terrorist attacks against Civil Rights Movement targets (McAdam, 1982; Newton & Newton, 1991), the 1970s witnessed relatively little RWT (Ross & Gurr, 1989). By the late 1970s, however, that began to change as groups affiliated with various branches of the KKK

reemerged, along with a larger growth of American paramilitary culture (Schlatter, 2009). According to Gibson (1994), losing the Vietnam War, along with changes in traditional gender and racial hierarchies, led to a "backlash" (see also Faludi, 1991) that, in the most extreme forms, manifested itself by a growth in racist, paramilitary groups trying to defend themselves from progressive, liberal changes to the status quo.

The wave of RWT that emerged during the 1980s can arguably be said to have started on November 3, 1979 in Greensboro, North Carolina. Known as the "Greensboro Massacre," this incident involved a collection of Klansmen and other white supremacists who attacked an anti-Klan demonstration (Cunningham, Nugent, & Slodden, 2010; *The Public Eye Magazine*, 2007; Smith, 1994). Members of the Klan drew their weapons and opened fire on the protestors, resulting in the death of five individuals and leaving eight others wounded (Cunningham et al., 2010). In the trial that followed, none of the Klansmen or other white supremacists were convicted.

RWT during the 1980s was, in particular, spurred by the death of Gordon Kahl (Smith, 1994). In 1983, Gordon Kahl, a North Dakota farmer, tax resister, and Christian Identity minister, shot and killed two US Marshal Officers when they attempted to arrest him for probation violations related to tax fraud (ADL, 2005a). A few months later, officers tracked him to a farmhouse in Smithville, Arkansas, where a shootout ensued, resulting in Kahl's death after he shot and killed another police officer (ADL, 2005a). Kahl's death galvanized right-wing extremists across the country and inspired the declaration of "War in '84," a credo that involved a loose confederation of groups committed to implementing a multi-pronged strategy to overthrow the US government (Smith, 1994).

Although the contemporary image of terrorism in the United States is largely shaped by 9/11, the empirical reality is much different (Jenkins, 2003; LaFree, Dugan, & Miller, 2015; Smith, 1994). A general overview of American terrorism during the 1980s reveals that right-wing extremists constituted two-thirds of the individuals indicted for federal terrorism-related charges. Two RWT groups in particular—(1) the Silent Brotherhood, and (2) The Covenant, The Sword, and the Arm of the Lord (CSA)—generated a substantial portion of these federal indictments (Smith, 1994).

The Silent Brotherhood

Robert Jay Mathews founded the Brüder Schweigen/Silent Brotherhood (also known as the Order), a terror cell that was formed in 1983 and was active for less than 2 years. At first, the group consisted of a small inner circle of members mostly recruited from a variety of existing right-wing extremist groups (e.g., Aryan Nations, National Alliance, and KKK). Eventually, however, the group grew to more than 30 members and was in the process of forming multiple cells across the country when a federal investigation resulted in a series of arrests that led to the group's downfall (Flynn & Gerhardt, 1995). While 28 members of the Silent Brotherhood were indicted under the Racketeer Influenced and Corrupt Organization (RICO) Act, Mathews was unwilling to surrender, and was finally killed during a 2-day standoff with federal authorities on Whidbey Island, Washington (Flynn & Gerhardt, 1995). Prior to the group's demise, the Silent Brotherhood was responsible for multiple murders, bombings, weapons violations, and two armored truck robberies that generated approximately US$4 million for the group, which was distributed across various right-wing extremist organizations (Flynn & Gerhardt, 1995; Smith, 1994).

Several years later, the Silent Brotherhood inspired the founding of the Order II, which drew members exclusively from Aryan Nations, and was interested in carrying on the work of the original Order (Smith, 1994). The Order II was entirely different from the original Order, and was comprised of a small seven-person terror cell that committed five bombings in 1986 alone. The group's leader, David Dorr, was responsible for at least six of the bombings and at least two murders (Smith, 1994). By 1988, the group's remaining members were convicted for various crimes. In addition to the Order and Order II, the CSA was also responsible for a significant amount of RWT committed in the United States.

CSA

Minister James Ellison formed CSA in 1971 as a Christian evangelical retreatist commune, but the group grew increasingly radical by the late-1970s, after Ellison claimed to have had a vision of a coming race war (Noble, 1998). CSA members also created paramilitary training areas that included a mock village called "Silhouette City … complete with pop-up targets of blacks, Jews, and police officers wearing Star of David badges" (Wright, 2007, p. 84). In 1982, the Federal Bureau of Investigation (FBI) suspected that CSA had over 100 active members living on or in close proximity to their compound on the Arkansas–Missouri border (Noble, 1998), while others estimated the number at closer to 200 (Wright, 2007). CSA members prepared for the coming race war by attending gun shows where they formed alliances with members of other radical groups including Aryan Nations, Silent Brotherhood, Posse Comitatus, local KKK chapters, Elohim City, and the Christian Patriot Defense League (Wright, 2007).

By the early 1980s, CSA declared the compound "an arms depot and paramilitary training ground for Aryan warriors" (Smith, 1994, p. 64). Following their declaration, CSA planned the assassinations of a local FBI agent and a US district judge, and plotted arsons, bombings, and the poisoning of municipal water supplies. The original plan to destroy the Alfred P. Murrah Federal Building in Oklahoma City was hatched by CSA members nearly 12 years before Timothy McVeigh and his accomplices completed the act (Noble, 1998). Although CSA failed to execute most of their terrorist plans, community members and their associates did bomb a Missouri community church known to support homosexuality and an Indiana Jewish community center. CSA members also detonated explosives near a natural gas pipeline in Arkansas; robbed and murdered a pawnshop owner they thought was Jewish; and murdered an African American Arkansas state trooper (Smith, 1994).

CSA's spree of violence ended in April 1985 after Ellison and others surrendered at their compound following a 4-day standoff with federal agents (Noble, 1998). The FBI's search of the CSA compound uncovered land mines, a large supply of cyanide, thousands of rounds of ammunition, and nearly 200 firearms including machine guns, assault rifles, and anti-tank rockets (Noble, 1998). The raid led to the federal indictment of 17 CSA members, and in September 1985 CSA leaders James Ellison and Kerry Noble and four other CSA activists were sentenced to lengthy federal prison terms on racketeering and weapons charges, which effectively destroyed the group and the settlement.[2]

No Lack of Effort: Foiled Plots in the 1990s

During the 1990s, 44% of terrorism-related federal indictments involved right-wing extremists (Simi & Futrell, 2010). Aside from 9/11, the Oklahoma City bombing is the most deadly act of terrorism to occur on American soil. But RWT during the 1990s neither began

nor ended with McVeigh and his conspirators. The Southern Poverty Law Center reports that, in the 5 years following the Oklahoma City bombing, more than 36 terrorist plots were planned or carried out by right-wing extremists (Blejwas, Griggs, & Potok, 2005). The list includes plans to: bomb or burn government buildings, banks, refineries, utilities, clinics, synagogues, mosques, memorials, and bridges; to assassinate police officers, judges, politicians, Civil Rights Movement figures, and others; to rob banks, armored cars, and other criminals; and to amass illegal machine guns, missiles, explosives, and biological and chemical weapons (Blejwas et al., 2005, p. 1). In addition, the Extremist Crime Database (ECDB) has documented over 160 Far Right–ideologically motivated homicide incidents since 1990, with the largest number driven by antipathy toward racial/ethnic minorities (Freilich, Chermak, Belli, Gruenewald, & Parkin, 2014).

Prior to the Oklahoma City bombing, the Aryan Republican Army (ARA) began a spree of 22 successful bank robberies across the Midwest, lasting from 1994 until 1996. According to some reports (Hamm, 2001; Wright, 2007), the ARA was linked to Timothy McVeigh and the Oklahoma City bombing. In the months following the Oklahoma City bombing, the "Sons of Gestapo" derailed an Amtrak train near Hyder, Arizona, killing one passenger and injuring scores of others. The perpetrators were never apprehended (SPLC, 2012). In November 1995, four members of the Oklahoma Constitutional Militia were indicted on federal charges related to plans of bombing abortion clinics, gay bars, and the Southern Poverty Law Center office in Montgomery, Alabama (SPLC, 2012).

Aside from the Oklahoma City bombing, the Olympic Park bombing was arguably the most substantial act of Far Right terrorism during the 1990s. After a lengthy multi-year "manhunt," Eric Rudolph was arrested for the 1996 Olympic Park bombing in Atlanta, Georgia, and additional bombings that targeted abortion clinics in Atlanta and Birmingham, Alabama, and an Atlanta lesbian nightclub. Rudolph's attacks killed two and injured 119 people. Although his exact motivations and links to other extremists remain somewhat mysterious, what is clear is that at the time of the offense, Rudolph was vehemently anti-abortion, antigay, antifeminism, racist, anti-Semitic, and felt that American culture was rapidly deteriorating (Vollers, 2007). In addition, Rudolph had a long history of associations with Christian Identity adherents and other right-wing extremists. When Rudolph was 18, he lived for 6 months at Pastor Dan Gayman's Christian Identity community, the Church of Israel, in Schell City, Missouri, where Gayman served as his mentor and considered Rudolph a potential husband for one of his daughters (Vollers, 2007).

Other violent RWT plots that involved explosives were also prevented in other parts of the United States. For instance, three members of the True Knights of the KKK were arrested in 1997 and convicted of conspiring to use explosive devices on a natural gas refinery in Fort Worth, Texas (Akins, 2006; SPLC, 2012). The plot involved planting bombs under gas storage tanks, which, when exploded, would release a toxic gas, hydrogen sulfide, into the atmosphere, poisoning the local community (Hafez & Rasmussen, 2012; Johnson, 2012). When speaking of harm that would have been imposed on the victims, one Klan member and co-conspirator, Catherine Dee Adams, noticed a child near the refinery and stated "I hate to be that way but if it has to be…" (Akins, 2006, p. 134). The explosion of the natural gas refinery was intended to cause mass casualties, but was also meant to divert the attention of law enforcement, which would allow members of the group to rob an armored car (Akins, 2006). Although members of the group detonated two "practice" bombs in preparation for the attack on the natural gas refinery (Johnson, 2012), the bombing was ultimately prevented because Robert Spence, the team leader and KKK imperial wizard, had second thoughts and decided to report the plan to the FBI (Hafez & Rasmussen, 2012). If successful,

the attack might have killed somewhere around 10,000–30,000 people (including a school full of children) (Hafez & Rasmussen, 2012; SPLC, 2012). All individuals involved in the incident pled guilty to charges of conspiracy, and Spence was entered into the witness protection program (SPLC, 2012).

Other attacks organized by RWT were also designed to inflict mass casualties. On February 23, 1998, three individuals with connections to the Christian Knights of the KKK, as well as three additional individuals who were members of The New Order, were arrested for plots to poison water supplies and plant bombs (ADL, 2001). Part of the plan included blowing up the Southern Poverty Law Center building and assassinating a federal judge as well as Morris Dees, civil rights attorney, and co-founder of the Southern Poverty Law Center (SPLC, 2012). All six individuals were convicted of weapons charges and received prison sentences of up to 7 years (SPLC, 2012).

Lone-Offender Terrorism

"Lone-wolf terrorism" is one of the most recent types of terrorism to gain widespread attention (Gruenewald, Chermak, & Freilich, 2013; McCauley, Moskalenko, & Van Son, 2013). The definition of what constitutes lone-wolf terrorism remains unclear, although recent efforts distinguish between "lone wolves," "loners," and "wolf packs" (Gruenewald et al., 2013). Lone-wolf terrorism refers to crimes or violence committed by individuals who operate independently but maintain extremist group memberships or affiliations to other active extremists who belong to extremist groups. These individuals differ from loner terrorists who self-radicalize and maintain no direct contact or membership with an extremist group. Finally, wolf packs refer to individuals who commit acts of terrorism in groups while also maintaining extremist group membership or affiliations (Gruenewald et al., 2013).

Interestingly, the contemporary genesis of the term lone-wolf terrorism is neither law enforcement nor academia but rather the US white supremacist movement. In the 1990s, white supremacist propagandists Alex Curtis and Tom Metzger popularized the term, while Louis Beam, a leading Klan and Aryan Nations representative, proposed, in the early 1980s, a "point system" that awarded scores to would-be assassins based on the importance of their targets (ADL, 2005b). Beam encouraged "leaderless resistance" efforts where single individuals or small cells engaged in crime because such activities occur outside of the group and reduce visibility from law enforcement (Beam, 1992). Additionally, individuals acting on their own diminish the threat of civil liability that can be used to bankrupt an entire organization (Beam, 1992). Other prominent white supremacist leaders such as William Pierce (now deceased), founder of the National Alliance and author of *Hunter* (a depiction of a fictional lone wolf that was dedicated to Joseph Paul Franklin, a real white supremacist lone-wolf assassin who killed at least 13 people across the United States), have also advocated this type of violence as a useful strategy at a time when white supremacists are greatly outnumbered and do not have the resources to wage open warfare. Because of this history, we prefer to use the term "lone-offender terrorism" in order to avoid perpetuating the very sensationalism that propagandists such as those mentioned in the preceding text were seeking by using the term "lone wolf."

The strategy of lone-offender violence in the name of a political cause has a long history. In recent decades, the US Far Right has been especially prolific in producing this type of violence. In fact, a majority (54%) of Far Right attacks that occurred in the United States between the years of 1990 and 2012 involved a single perpetrator (Perliger, 2012, p. 121).

For example, in 2009, Far Right lone offenders killed at least 10 people in incidents that ranged from the neo-Nazi James von Brunn's attempted massacre at the Holocaust Museum in Washington, DC, to Scott Roeder's shooting and killing of a Kansas doctor known for performing late-term abortions, to neo-Nazi Richard Poplawski who shot and killed three Pittsburgh police officers, in part, because he feared losing his gun rights, to Keith Luke of Brockton, Massachusetts, who shot and killed two African immigrants, then raped and tried to murder a third. After police apprehended him, Luke confessed that the slayings were part of his plot to kill as many non-whites and Jews as possible. He had planned to continue his killings at a synagogue bingo hall later that night (ADL, 2013).

Luke's violent attack, in particular, highlights some important aspects of lone-offender terrorism. Unlike other lone offenders with known direct ties to organized extremist groups, Luke apparently radicalized completely online, where he spent most of his free time on white power websites, such as Podblanc, which celebrates racially motivated murder, along with "lone-wolf" domestic terrorism, and features videos of skinheads in several countries beating non-white immigrants to death (SPLC, 2009). According to the Anti-Defamation League, Luke was especially active online in the weeks leading up to his killing spree, surfing racist websites, posting racist commentary, and watching more than 2,300 white power videos on YouTube (ADL, 2013; JTA, 2014). Most of the videos that he tagged as favorites "were anti-Semitic or white supremacist in nature, with titles such as "Aryans Rise—They Seek Your Death" (ADL, 2013).

More recently, on August 5, 2012, Wade Michael Page opened fire at a Sikh Temple in Oak Creek, Wisconsin, just outside of Milwaukee, killing six temple members and wounding four others. In the decade before his shooting rampage, Page, a neo-Nazi Hammerskin, made a name for himself among white supremacists as a member of several well-known white power bands with names like *Youngland, Intimidation One, End Apathy*, and *Definite Hate*.

Less than 2 years later, in suburban Kansas City on Passover eve 2014, Frazier Glenn Miller[3] gunned down a 14-year-old boy and his grandfather outside a Jewish Community Center. He then murdered another woman outside a nearby Jewish retirement community. As television cameras documented his arrest, Miller, one of the Klan leaders in the Greensboro Massacre 35 years earlier, shouted "Heil Hitler!" (CBS News, 2014).

Two of the most recent Far Right lone-offender attacks involved violence directed toward law enforcement—a common target among Far Right terrorists (Freilich & Chermak, n.d.). On June 8, 2014, right-wing extremists Jerad and Amanda Miller fatally shot two police officers while they were eating lunch at a Las Vegas strip mall (ADL, 2014). The officers were ambushed; shot at point blank range; and their badges, weapons, and ammunition were taken from their bodies (*The Washington Post*, 2014a). The Millers covered their bodies with a Gadsden flag, a common symbol adopted by a variety of Far Right extremists (*The Washington Post*, 2014a). The two individuals then fled to Wal-Mart, where they shot and killed a civilian before engaging in a shootout with law enforcement and eventually committing suicide (ADL, 2014). The day prior to the killings, Jerad Miller posted on the social media website Facebook, "The dawn of a new day. May all of our coming sacrifices be worth it" (ADL, 2014).

Shortly after the attacks in Las Vegas, another ambush occurred on a state police barracks in Blooming Grove, Pennsylvania (*The Washington Post*, 2014b). Anti-government survivalist Eric Frein shot two police officers, resulting in serious injury to Alex Douglass and the death of Bryon Dickson (*Alaska Dispatch News*, 2014). Frein was reportedly upset with

government officials and expressed a desire to kill law enforcement officers and engage in mass acts of violence (*Alaska Dispatch News*, 2014). After the shooting incident, Frein escaped to the woods of the Pocono Mountains and remained at large for more than 6 weeks (Pradelli, 2015; SPLC, 2014). The manhunt involved over 1,000 officers and cost approximately US$10 million, until Frein was apprehended in a field near an airport hangar where he sought refuge (SPLC, 2014). While searching the hangar, law enforcement found a handgun, computer, and two rifles (Pradelli, 2015). Authorities also found pipe bombs that belonged to Frein, which resulted in charges of possessing weapons of mass destruction (SPLC, 2014). In addition to being charged with possession of weapons of mass destruction, Frein was also charged with murder, homicide of a law enforcement officer, and attempted murder (SPLC, 2014). The prosecutor assigned to the case is seeking the death penalty (Pradelli, 2015).

Recent studies provide much needed empirical evidence about the characteristics of lone-offender terrorism. According to a recent study that examined incidents of Far Right acts of terrorism that resulted in murder between the years of 1990 and 2008, the average age of the lone offender was 32 years, 57% of lone offenders had a prior arrest, and the most prevalent type of weapon used in these incidents was a firearm (44%) (Grunewald et al., 2013). In comparison, over 80% of "loners" and approximately 23% of "wolf pack" members were found to use firearms (Grunewald et al., 2013). Additionally, it was determined that, contrary to popular belief, the frequency of Far Right lone-offender attacks have not increased in the past decade. Specifically, the frequency of lone-offender attacks was highest in the 1990s, and these types of incidents have actually decreased in frequency since 2001 (Grunewald et al., 2013).

Lone-offender terrorism has both strengths and limitations in terms of its effectiveness as a terrorism tactic. Compared with group-based terror plots, lone offenders pose substantial challenges in terms of pre-attack detection and infiltration. A single individual who does not share his/her plans is very difficult to interdict. In addition, a single individual may act more spontaneously, making advance warning even less likely. At the same time, lone offenders rarely possess the necessary capacity to inflict mass casualties, and thus these attacks tend to be far less lethal (Perliger, 2012).

Conclusion

In recent years, the term "terrorism" has become synonymous with Islamic radicalism and others sources of foreign threats; however, right-wing domestic terrorism represents the oldest form of terrorism in the United States (Chalmers, 1965; Michael, 2014; Newton & Newton, 1991; Trelease, 1971), and accounts for a significant number of domestic fatalities in the past fifteen years (New America Foundation, 2014). While the terms "Far Right" or "right-wing extremist" covers a broad constellation of movements, ideologies, groups, and individuals, there are certain common and overlapping characteristics that cut across this constellation.

This chapter focused primarily on white supremacists who belong to many different local, national, and international networks but have a shared belief in uniting against Jews, African Americans, Hispanics, homosexuals, and anyone else opposed to the supremacy of the white race. Many of these groups have a long history of terrorism in the United States; however, the KKK has the longest history of RWT, and continues to remain active today in various forms.

Throughout the twentieth century, Klan groups initiated violent attacks across the country. By the end of the 1970s, white supremacists were increasingly adopting neo-Nazism and Christian Identity. Two Far Right terror groups active in the 1980s best exemplify these trends: the Bruder Schweigen and the CSA. Specific acts of terrorism committed by these groups included multiple murders, bombings, weapons violations, and armored truck robberies (Flynn & Gerhardt, 1995; Smith, 1994). The 1990s witnessed another surge of Far Right terrorism, including the highly lethal attack on the Murrah Federal building in Oklahoma City that resulted in the deaths of 168 individuals.

More recently, lone-offender terrorism has gained a significant amount of attention and refers to individuals who commit acts of terrorism individually but maintain membership in an extremist group or affiliations to other active extremists who belong to extremist groups (Grunewald et al., 2013). Lone-offender terrorists include James von Brunn, Scott Roeder, Keith Luke, Wade Michael Page, Frazier Glenn Miller, and others who have committed murder for reasons associated with the ideological and political beliefs of the Far Right.

It is unlikely that acts of Far Right terrorism will ever end completely; however, scholars and practitioners should continue researching the behavior of such groups with the goal of furthering our understanding of extremist groups and informing policies aimed at prevention and intervention. Future research on Far Right terrorism should place additional emphasis on the trajectory of individuals as they radicalize into movement participation. Specifically, research should consider studying individuals as they transition from one group to another (paying close attention to the degree of extremist beliefs and violent behavior associated with each group), as well as those individuals who maintain simultaneous memberships in multiple extremist groups. This information would help scholars and practitioners understand the complexity of extremist involvement, the progression of radicalization or de-radicalization, and the degree to which adherence to ideological beliefs corresponds with group membership. Triggering events and social and psychological processes associated with de-radicalization and disengagement from groups on the Far Right should also be examined further with the intent of developing programs to influence group exit and violence reduction. Future research might uncover previously unidentified sources of de-radicalization and disengagement that may be used by programs to help prevent future acts of terrorism among members of the Far Right. Finally, research should further investigate specific law enforcement responses to Far Right terrorism, such as the effectiveness of terrorist threat assessment models and agent provocateur tactics through the use of undercover agents and confidential informants. Specifically, research should investigate the effectiveness of threat assessment models in detecting the occurrence of Far Right terrorism and whether infiltration has the unintended consequence of further alienating and solidifying distrust and anger among members of the Far Right. Although conducting future research in this area presents numerous challenges, the information gleaned may prevent future victimization and acts of terror.

Notes

1   While Christian Identity adherents are by definition white supremacists, most neo-Pagans are not associated with the white supremacist movement.
2   Kerry Noble, James Ellison's right-hand man, testified against Ellison, rejected Aryan ideology, and now writes and speaks publicly about the threat of domestic terrorism from extremist white power groups.
3   He also used the name "Frazier Glenn Cross."

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Left-wing Terrorism: From Anarchists to the Radical Environmental Movement and Back

Jennifer Varriale Carson

While this chapter's primary goal is to provide an overview of left-wing terrorism in the United States, it should be noted that the very definition of "left wing" has no uniform conceptualization. This is mostly due to the malleable nature of what a leftist ideology was, what it came to be, and what it is considered today. Specifically, the left wing has represented different things to different scholars at different times. This is perhaps best represented by the debate behind including radical environmental and animal rights groups under the leftist umbrella, which were previously identified as single-issue terrorists.

In his groundbreaking contribution *Terrorism in America*, Smith (1994:93) contended that there was "little publicly available evidence linking the extreme Left to the single-issue environmental and animal rights activists." Similarly, Handler (1990:198) maintained that such activists were "weak extensions of left-wing forms of terrorism." At this time, the traditional left wing was considered to be much more focused on economic issues tied to governmental systems, rather than on the welfare of the environment or animals. Acknowledging that a left-wing ideology was difficult to conceptualize, Smith (1994) distinguished five major similarities that all groups shared. These similarities included how they viewed human nature, their economic perspectives, their operational bases, their selection of targets, and their attack tactics. This classification system provided for an eclectic mix of sub-ideologies, including Puerto Rican terrorist groups.

Over time, terrorist attacks such as those perpetrated by Ted Kaczynski, further blurred the line between the traditional leftist ideologies and those solely focused on the environment and animals. The practice of many in the radical eco-movement to tie issues such as environmental pollution or animal abuse to the existing governmental and economic structure, coupled with the desistance of traditional leftist groups, has led to a change in what is now considered to be the left wing. Nearly 20 years after Smith's classification, Chermak and Gruenewald (2015:140) defined left-wing extremists as those with a "primary ideological focus and criminal activities (that) stem from their ardent belief in protecting the environment and animal rights."

Interestingly, the radical eco-movement has also undergone its own spirited debate regarding definitions (Amster, 2006; Liddick, 2006; Vanderheiden, 2005, 2008; Welchman, 2001).

On one side is the contingent that believes this activity should be referred to as "ecotage." This term, defined as the economic sabotage of inanimate objects thought to be complicit in environmental destruction (Vanderheiden, 2005), has been criticized as not fully incorporating all behavior perpetrated by these groups (Carson, 2014; Perlstein, 2003). The other viewpoint is composed of entities such as those of federal and local law enforcement, which for years identified the radical eco-movement as one of the most significant domestic terrorist threats (Freilich et al., 2009; Mueller, 2007). Proponents of this viewpoint advocated for the much more pejorative "ecoterrorism," defined as "the use or threatened use of violence of a criminal nature against innocent victims or property by an environmentally orientated sub national group for environmental–political reasons, aimed at an audience beyond the target, and often of a symbolic nature" (Jarboe, 2002).

Other research has focused on this phenomenon as a movement, rather than group-based behavior, especially given the high incidence of lone-wolf-type attacks. This decision is clearly reflected in the more recent literature. For example, Carson, LaFree, and Dugan (2012) classified criminal and terrorist incidents as those tied to the radical environmental and/or animal rights movement if they were "principally motivated to protest the destruction or degradation of the environment, the mistreatment of animals, or both" (p. 297). Thus, this operationalization utilized the context of the attack rather than relying on a group claiming the incident as its own.

Conjointly, there also remains a lack of consensus regarding whether even these two motivations (i.e., environmental and animal-related ideologies) should be considered as the same (Ackerman, 2003). Research has discovered important distinctions between the two, with the former ideology much more likely to perpetrate attacks that cause damage and the latter responsible for a greater number of incidents that target people (Carson, LaFree, & Dugan, 2012). However, most scholars would maintain as Ackerman (2003:188) has, that "while these groups may not constitute a single entity, they are at the very least close cousins."

These definitional debates notwithstanding, it would appear that there have been three main trends in the left-wing movement in the United States: (1) traditional groups focused on social and economic inequality; (2) the radical environmental and animal rights movement; and (3) the most recent juxtaposition that blurs the two. Given the overall lack of attention in the extant literature, this chapter focuses primarily on the first category in regard to an overview of activity, a discussion of key motivations, and a review of its most prominent figures. The chapter also reviews the recent flurry of research on the radical eco-movement and ends with a discussion of whether it has devolved into its traditional left-wing origins.

Traditional Left-wing Movement, 1960–1985

Overview

There is some disagreement as to how much US terrorism can be attributed to the traditional left-wing movement, which was active from 1960 to roughly the mid-1980s.[1] Data from the Global Terrorism Database (GTD) concludes that traditional left-wing terrorism represented over 45% of all terrorism in the United States (National Consortium for the Study of Terrorism and Responses to Terrorism, 2013). This figure is significantly less than what other scholars and policymakers have identified, which is upward of 75% of all US terrorism[2] (Smith, 1994; Seger, 2001). Figure 20.1 compares this ideology with other forms
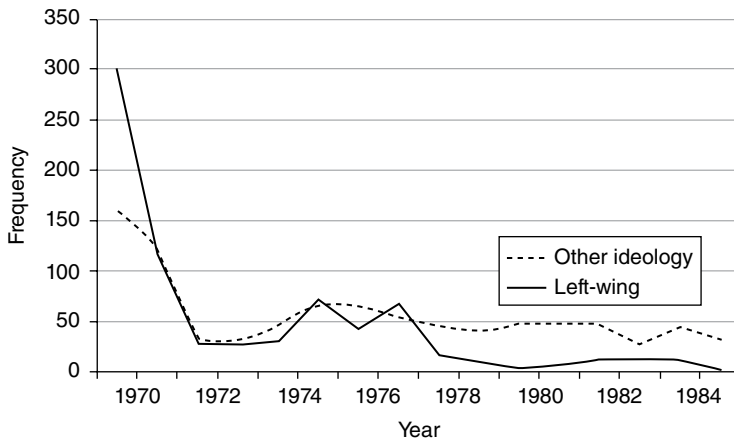
Figure 20.1   Terrorism in the United States, 1970–1985

based on the GTD.[3] Between 1970 and 1985, traditional left-wing terrorist groups perpe-
trated over 700 attacks. This type of activity peaks in 1970 with around 300 incidents, and
then witnesses a significant drop of over 60% in the subsequent year. Other, albeit less
pronounced high points in attacks occurred in 1975 and 1977, with around 70 incidents.
Notably, these are also the 3 years where left-wing terrorism outnumbered all other kinds of
US terrorism combined. Traditional leftist attacks tapered off by around the mid-1980s.

The left-wing movement during this time was primarily focused on two issues: the
United States' involvement in what some critics deemed "imperialism," and (2) income
inequality as a direct product of a capitalist economic system (Hoffman, 2006; Smith, 1994;
Ackerman & Bale, 2012). In regard to the former, leftists believed that the United States
should not exploit, either politically or economically, the lesser-industrialized areas of
the world. This grievance, as highlighted by the Vietnam War, was perceived as the imposi-
tion of Western values and structures on non-Western societies, regardless of those same
societies' resistance against such an adaptation. Many in the left-wing movement also
believed that capitalism was inherently corrupt, maintaining that it indirectly leads to
the abuse of members of the lower economic classes and members of minority racial
groups—especially African Americans.

A typical member of a left-wing terrorist organization represented a unique demo-
graphic. Compared with their right-wing counterparts, these individuals were younger and
more likely to be college educated and employed in white-collar professions (Handler, 1990;
Smith, 1994; Hewitt, 2003). This is perhaps not surprising, given that many left-wing mem-
bers originated in radical student groups. In addition, these entities were also more likely
than right-wing groups to include female members. In fact, Handler (1990) found close to
a near split in gender in left-wing groups, with women even more likely than men to hold
leadership positions. This high level of female participation can mostly be attributed to the
feminist implications of ideologies focused on reducing social and economic inequalities
(Cunningham, 2007; Handler, 1990; Smith, 1994). However, equality in gender participa-
tion does not seem to extend to equality in race participation; Handler (1990) reports very
few minorities among the core leadership of left-wing groups. This is especially remarkable
given the relatively diverse membership base, with Smith (1994) noting that over 70% of
those indicted for left-wing terrorist-related crime were racial minorities.

When it comes to more macro-level characteristics, compared with other groups, left-wing radicals were more likely to live in urban areas (Smith, 1994). They also resided relatively close to the areas where they engaged in activities, yet had greater mobility than other groups. Specifically, Smith, Damphousse, and Roberts (2006) found that the majority of leftists lived less than 15 miles from their attack site. These same individuals engaged in preparatory behaviors, those that occur before an incident, such as the purchasing of supplies, an average of 160–224 miles from their eventual attack site (see Smith, Roberts, and Damphousse, Chapter 4, current volume). Hence, while traditional left-wing terrorists were similar to followers of other ideologies in that they attacked close to where they lived, they were also more mobile during the planning phases.

Tactics and Targets

Table 20.1 shows the distribution of tactics and targets as perpetrated by the traditional left-wing movement (National Consortium for the Study of Terrorism and Responses to Terrorism, 2013). As demonstrated, leftists primarily utilized bombings as a tactic, representing over 60% of incidents. The aforementioned Ted Kaczynski was responsible for more than a dozen of these attacks, which mainly took the form of pipe bombs directed at academic and airline targets. Table 20.1 also indicates that businesses were the principal targets of left-wing terrorists, with over 30% of incidents directed toward banks such as Chase Manhattan. Government targets, an important but distant second in terms of popularity, included attacks such as the 1970 bombing of a Department of Labor vehicle, which was being used to transport employees to a government training.

Selective about their use of violence, traditional left-wing terrorists considered such measures to be justified when the target represented a symbol of "capitalist exploitation and repression" (Hoffman, 2006:231). Many members of these same groups felt that attacks against the "enemy," often symbolized as the state and its actors, should not produce innocent casualties. Violence was viewed by some as counterproductive and/or hypocritical to the left wing's overall message. In fact, groups such as Weather Underground lost a number of members and had a series of factional disagreements after their attacks were met with public criticism (Ross and Gurr, 1989). Hoffman (2006) gives the example of a 1977 hijacking, denounced by a leader as "elitarian madness." Even when more dangerous tactics were utilized, such as bombings, violence was often not the primary objective as a number of

Table 20.1 Attack and Target Type of Traditional Left-wing US terrorists

Attack Type	Frequency	Target Type	Frequency
Assassination	10	Business	243
Armed assault	80	Government	125
Bombing/explosion	462	Police	108
Hijacking	6	Military	101
Hostage taking	24	Private citizens	50
Facility/infrastructure	176	Educational	62
Unarmed assault	1	Utilities	35
Unknown	3	Religious figures	10
		Other	28
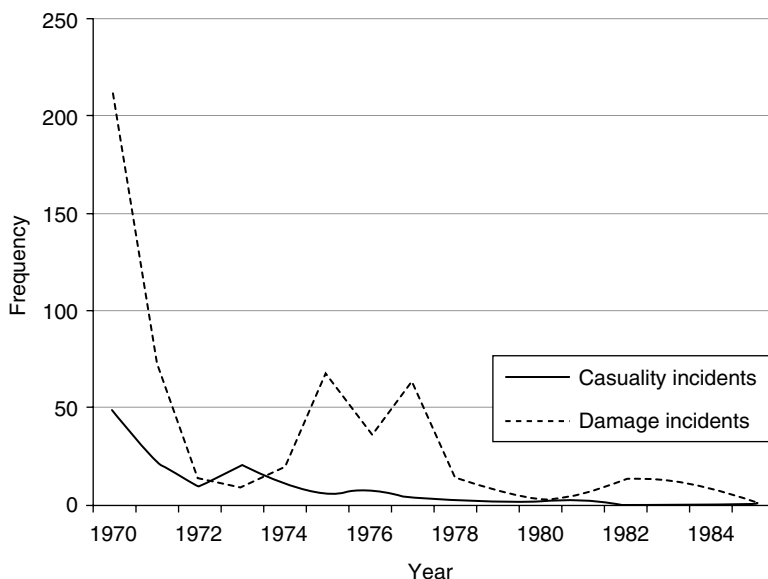
Figure 20.2   Casualty and Damage: Left-wing Incidents in the United States, 1970–1985

these incidents were preceded by a warning phone call. Rather, these types of attacks were intended to publicize left-wing ideological beliefs.

This is not to say that traditional leftists never resorted to violence, or that their attacks were not destructive. Figure 20.2 demonstrates these types of incidents over time and yields similar trends to both each other and to those shown in Figure 20.1 (National Consortium for the Study of Terrorism and Responses to Terrorism, 2013). Around 18% of terrorist attacks perpetrated in the name of traditional left-wing ideologies involved fatalities or injuries. The most lethal of these was the 1973 killing of seven people at a hotel in downtown New Orleans by Mark Essex, who was loosely tied to the black nationalist movement (Times-Picayune, 2011). This incident notwithstanding, almost two-thirds of total left-wing attacks in GTD were limited to property destruction. One of the most notable of these was the 1970 fire-bombing of the University of Kansas' student union, causing damages of over US$3 million.

Interestingly, it was in part their ideology that became the impetus for the traditional left wing's demise (Smith, 1994; Hoffman, 2006). As Figures 20.1 and 20.2 both show, activity in 1985 was nearly five times less than it was in 1970, with only one incident producing a casualty. Despite being much more ideologically committed than their right-wing counterparts, as highlighted through their steadfast lack of state cooperation (Smith, 1994), members became increasingly impatient and disillusioned. Simply put, leftist philosophical principles proved to be too abstract to attract mass support. This dilemma was nicely elucidated by Susan Stern, a leader of Weather Underground, in her discussion of what would happen if the group were actually able to achieve its goal of a new social and economic system:

> Once we tore down capitalism, who would empty the garbage, and teach the children, and who would decide that? Would the World be Communist? Would the Third World control it? Would all the whites die? Would all the sex perverts die? Who would run the prisons—would there be prisons? Endless questions like these were raised by the Weathermen, but we didn't have the answers. And we were tired of trying to wait until we understood everything (as quoted in Hoffman, 2006:245).

This problem, coupled with the lack of a varied recruitment base, caused many of the traditional leftist groups to die out. Hoffman (2006) maintained that the role of drugs as a main causal factor has been overstated, as he notes that substance use among other ideologies has been shown to be much more common.

It would be remiss not to acknowledge the role that the government, and in particular the FBI, played in the desistance of traditional left-wing groups; in fact, Smith's (1994) data are entirely comprised of federal indictments from the Bureau's counterterrorism program. Furthermore, Ross and Gurr (1989) attributed their proactive and sometimes aggressive tactics to the arrest of 18 members of Black Liberation Army, and all seven members of the United Freedom Front (UFF). Although the government is able to claim some responsibility for the decrease in left-wing activity, a handful of members were able to avoid prosecution by leaving the country for safe houses in other countries. This was a direct artifact of the sophisticated networks associated with traditional left-wing groups, especially given those connected to the Puerto Rican separatist movement (Seger, 2001; Smith, 1994).

Key Groups

The traditional leftist movement can be subdivided in three main subcategories: student leftist organizations that evolved into violent political groups, black nationalist groups, and the Puerto Rican Marxist–Leninist movement (Smith, Damphousse, & Roberts, 2006). The latter two, while also focused on the inequality produced by capitalism, had the added goal of creating an independent socialist–communist state. For black nationalist groups, such a place would be formed from existing southern states, while fundamental to the Puerto Rican separatist movement was independence from the United States. Table 20.2 shows the number of incidents perpetrated by key groups as distinguished by these ideologies (National Consortium for the Study of Terrorism and Responses to Terrorism, 2013).

Perhaps the most infamous of the first subcategory of students-turned-violent-extremists is the Weatherman. This organization was a splinter of the anti-Vietnam War organization named Students for a Democratic Society (SDS; Ross and Gurr, 1989; Smith, 1994). After a contingent of the SDS became disillusioned with the lack of progress from non-violent action, a number of its members organized a 4-day violent protest in Chicago, marked with rioting and culminating in the bombing of the Haymarket policeman statue. This protest, involving 200–300 participants, became known as the "Days of Rage," and served as the catalyst in forming a more violent and, later on, more clandestine organization. Named after the lyrics from a Bob Dylan song, the Weatherman (later rebranded with the more gender-neutral "Weather Underground") was responsible for 45 incidents[4] in the

Table 20.2   Key Left-wing US Terrorist Groups by Ideology

Ideology	*Key Groups*	*Incidents*
Student radicals	Weatherman/Weather Underground	45
	M19Co	20
	UFF	29
Black nationalists	Black Panthers	24
	Black Liberation Army	36
Puerto Rican separatists	FALN	98

United States from 1970 through 1975, with only one incident resulting in a fatality. This fatal attack occurred in September 1970, in conjunction with the Black Panthers, and involved a bank robbery in Brighton, Massachusetts, where a police officer was shot. The Weather Underground became inactive around 1975, despite avoiding infiltration by law enforcement, primarily due to the arduous mandates enforced by its leadership (Ross & Gurr, 1989).

Two other active groups falling within the student subcategory were that of May 19th Communist Organization (M19CO) and UFF. The former, named for the day that both Malcolm X and Ho Chi Minh were born and considered a front for the Revolutionary Armed Task Force, was a combination of members from the Black Panther Party, Weather Underground, and Students for a Democratic Society (Ross & Gurr, 1989; Seger, 2001; Smith, 1994; Smith et al., 2006). M19CO was responsible for a series of bombings, including one targeting the US Capitol. Although these bombings did not produce casualties, M19CO's rhetoric justified murder, particularly of alleged government agents. Such was the case when the group committed an armed robbery of an armored car, killing the guard and two police officers while fleeing the scene. This was the only incident perpetrated by M19CO known to involve fatalities. In the mid-1980s, nearly all of its members were arrested, leading to the group's demise.

UFF was mainly focused on issues central to Latin America and South Africa; namely that of corporate imperialism and apartheid (Seger, 2001; Smith, 1994; Smith et al., 2006). Despite being small in membership, UFF was extremely active during the 1970s. In fact, 29 incidents can be attributed to UFF, including the 1976 bombing of the Suffolk county courthouse in Boston that injured 22 people and caused damages of over US$1 million (National Consortium for the Study of Terrorism and Responses to Terrorism, 2013). UFF perpetrated a number of similar bombings in Northeast United States, although its only known fatality came from a run in with a state trooper in December 1981. Although members avoided detection for a number of years, a special task force eventually led to the arrest of all of UFF's members.

In regard to the second subcategory, those of black nationalist groups, Black Panthers and its later iteration, Black Liberation Army (BLA), represent the most active. Black Panthers were founded in California in 1966 and were based on the premise that capitalism had led to the exploitation and oppression of African Americans. This group was notable for its efforts at providing social services to the less fortunate, highlighted by the creation of the "Free Breakfast for Children" program. Nonetheless, Black Panthers also committed over 20 of the terrorist attacks recorded in GTD within a short time span. BLA splintered from Black Panthers in 1971, with the primary goal of taking up arms for the cause (Ross and Gurr, 1989). BLA perpetrated over 30 attacks from 1970 to 1985, with almost half of those incidents involving at least one death (National Consortium for the Study of Terrorism and Responses to Terrorism, 2013). The majority of these deaths were of members of the police, including the 1972 killings of NYPD Officers Greg Foster and Rocco Laurie, who were gunned down after walking out of an East Village diner.

The face of the third and final subcategory was Fuerzas Armadas de Liberacion (FALN), the Puerto Rican separatist group. Based on its primary goal of Puerto Rican independence, FALN members focused their efforts on the release of what they deemed "political prisoners" (Smith et al., 2006). FALN perpetrated the most incidents of any traditional leftist group, responsible for over 12% of attacks. Of these incidents, the 1975 bombing of a tavern in New York was the most deadly, when four people were killed and another 53 were wounded

(Bovsun, 2012). Although no one was directly prosecuted in connection with the attack, FALN took credit for the incident via a phone call to the Associated Press 15 minutes after the explosion. Much of FALN's demise can be attributed to a multi-faceted effort led by the FBI, which involved both reactive and proactive measures (Belli, 2012). It was ultimately the latter category of strategic initiatives that allowed the FBI to arrest five of FALN's members and thwart a number of potentially destructive plots. However, Belli (2012) also acknowledges the role that other factors played in FALN's desistance, including a dwindling support base.

Radical Environmental and Animal Rights Movement, 1970–Today

Empirical research on the radical environmental and animal rights movement has thrived in the past decade (Carson, LaFree, & Dugan, 2012; Carson, 2014; Chermak et al., 2013; Chermak & Gruenewald, 2015; Joose, 2012; Liddick, 2006, 2013). Interestingly, members of this movement represent a demographic similar to that of traditional leftist organizations. Compared with members of other extremist organizations, both are more likely to be composed of women and the college-educated (Chermak & Gruenewald, 2015; Cunningham, 2003; Liddick, 2006). Chermak and Gruenewald (2015) also found similarities between members of radical eco-groups and those in right-wing organizations, including an overlap in age (average 28 years), race (predominantly white), and military experience (little to none). However, the differences may be even more pronounced as environmental and animal rights extremists are less likely to have a mental illness or to be in a romantic relationship than other domestic terrorists (Chermak & Gruenewald, 2015). When it comes to macro-level factors, it is perhaps not surprising that these individuals also live in more racially and economically diverse areas than their right-wing counterparts. As with traditional left-wing groups, those involved in the radical eco-movement also resided closed to their attack targets (Smith et al., 2006). However, compared with other extremists, Smith et al. (2006) found that environmental and animal rights extremists have a short planning horizon, engaging in all preparatory activities within 15 days of attacks.

As a whole, research has also demonstrated that, while the radical eco-movement has been extremely destructive, they have also been a relatively nonlethal threat in the United States (Carson, LaFree, & Dugan, 2012). In fact, the majority of activity perpetrated by the movement is better classified as crime than terrorism. The use of violence has been rare, with only one suspected lethality and a handful of injuries in a 37-year time span. Nonetheless, nearly 70% of attacks committed by environmental and animal rights extremists involve some sort of property damage, with an average loss of over US$800,000. This is likely related to the radical eco-movement's preference to target businesses rather than people, along with their propensity for facility attacks above all other tactics.

Figure 20.3 shows the trends in activity from 1970 to 2007, disaggregated by (1) ordinary crime and terrorism, (2) just terrorism, and (3) those incidents involving damage (Carson, LaFree, & Dugan, 2012). As demonstrated, 1985 represents the beginning of an upward trend, the same year when traditional left-wing groups had all but desisted. Also notable is the decrease in activity post-9/11, likely the result of multiple factors both within and outside of the movement. Many radical eco-groups ascribe to environmental philosophies that run counter to the use of violence. For example, Arne Naess' deep ecology is based on the idea that all life is sacred. Acts of terrorism, especially those involving violence against persons, can dry up support with the less radicalized albeit criminal contingent that
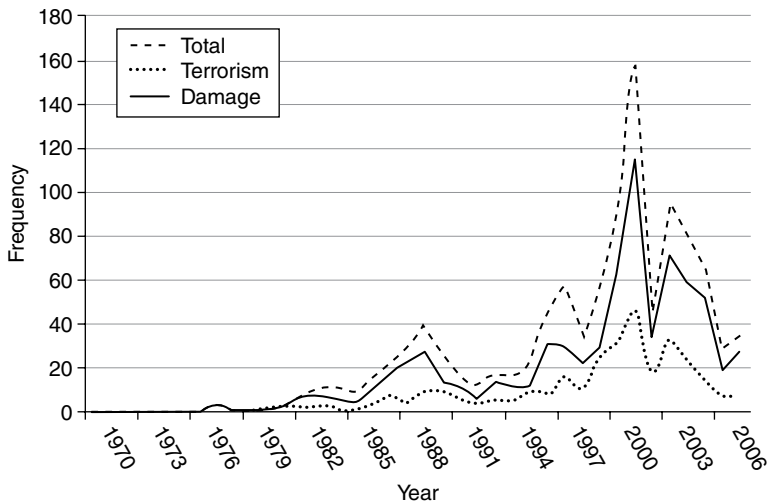
Figure 20.3   Total, Terrorist, and Damage Incidents Perpetrated by the Radical Eco-Movement, 1970–2007

adheres to these types of values. Carson and Bartholomew (2016) found support consistent with this idea as operationalized through high-profile attacks. Specifically, those events deemed to be especially brutal, such as that of the 1987 near decapitation of a logger by a tree spike, did decrease the subsequent environmental terrorism. Thus, related decreases in the timeline may be an indication of a deterrent effect of sorts, where those in radical eco-groups become disenchanted with the movement and, as a result, commit less crime and terrorism on its behalf. Such was the case with Judi Bari, a leader of Earth First! who responded to this tree-spiking incident by reducing her involvement with the group.

On the other hand, and despite a concerted effort by lawmakers, along with research that identifies the consideration of sanctions in decision-making (Carson et al., 2012), federal legislation has been a relatively ineffective deterrent (Carson, 2014; Yang, Su, & Carson, 2014). In an examination of four federal sentencing acts, Carson (2014) found that only one, that of the Animal Enterprise Terrorism Act of 2006 (AETA), decreased the hazard of subsequent terrorist and criminal incidents. In fact, other legislation created displacement effects by increasing environment-related incidences, while at the same time decreasing the hazard of those committed in the name of animal rights. Similarly, Yang, Su, and Carson (2014) found that, while AETA and the PATRIOT Act decreased terrorism, the Animal Enterprise Protection Act of 1992 produced a backlash effect. The authors conclude that AETA's success over that of other legislation may be the result of its increased scope; specifically, AETA included provisions that protected third-party targeting (e.g., holding responsible the bank that has stock in an animal-testing facility).

All in all, the threat of the radical eco-movement appears to be dissipating. In 2013, not one of the 15 US terrorist attacks recorded in GTD could be tied to environmental or animal rights extremists. It may be time for counterterrorism efforts to focus on other homegrown threats that have proven to be more violent. One possibility is that the radical eco-movement has not been eliminated, but has been, and will continue to be, replaced with a gradual convergence of traditional leftist ideology and environment and animal rights causes.

Future of the Left Wing: An Overlap in Ideologies?

In 2001, Seger described left-wing terrorism as "alive and well" (p. ii), and cautioned that "the lessons of the 1960s and 1970s should not have to be relearned in the next century" (p. iv). The crux of this argument is that the ideologies of the radical eco-movement have become increasingly intertwined with those of the traditional left wing. As described by Ackerman (2003:147), this conclusion is problematic, given that "the anarchist influence has the capacity to convert those initially concerned primarily for the environment into social revolutionaries acting outside the legal system." He further notes that transitioning to this kind of mindset limits the capacity that groups have to working through legitimate means. Environmental and animal rights activists have often utilized lawful avenues to achieve their goals, such as the lobbying of governmental officials and the use of non-violent protests. However, inherent to an anarchist philosophy is the overthrow of government, which would indicate more violent strategies.

This overlap in philosophies is perhaps best exemplified by the emergence of green anarchy, a much more radical environmental philosophy. Similar to that of the traditional left wing, green anarchy holds an anti-modernization sentiment, blaming the capitalist system for facilitating environmental destruction. Originally developed in a magazine from Oregon by the same name, green anarchy has since devolved into a Facebook page and a related website. Although these media are currently inactive, the website for the Arissa Media Group, an iteration associated with former members of the radical eco-movement, sells materials that "promote political and social justice, human rights, and environmental and animal protection" (Arissa Media Group, 2015). Such selections include *The Logic of Political Violence, We Are Our Own Liberators: Selected Prison Writings*, and *This Country Must Change: Essays on the Necessity of Revolution in the USA*.

Nevertheless, scholars have consistently maintained that it is much more important to focus on what the left-wing movement does rather than says, given its propensity for rhetoric. Since 1985 and the demise of the traditional left-wing movement, there have been 24 attacks listed in GTD that fall outside of a pure environmental or animal rights ideology (National Consortium for the Study of Terrorism and Responses to Terrorism, 2013). Of these, 75% were the attacks perpetrated by Luke Helder. Helder was a college student who placed a series of pipe bombs in mailboxes, injuring six people (Reaves, 2002). He had hoped to bring attention to his anti-government manifesto, based on his primary grievance that the government limits personal freedoms, particularly those associated with marijuana use. This case, in particular, demonstrates little overlap between the traditional left wing and the radical eco-movement.

However, it may be that lone-actor types like Helder represent the most risk for an ideological confluence. As noted, the radical eco-movement is one of "leaderless resistance" (Joose, 2012), and is much more likely to perpetuate lone-wolf activity than other domestic ideologies (Chermak & Gruenewald, 2015). Such was the case with James Lee, described by some outlets as an "environmental militant," and responsible for the 2010 kidnapping of three people at the Discovery Channel (Effron & Goldman, 2010). Lee's ideology was based on his perception that institutions had supported a pro-birth, anti-environment agenda, and that this was perpetuated by the media—namely, programming involving large families. His manifesto included elements of a traditional leftist philosophy coupled with more recent environmental principles.

Ackerman and Bale (2012) argue that there may be other "strange bedfellows" in the future of the left-wing movement. The authors reference right-wing militia groups aligning with Marxist organizations over a shared opposition to globalization, along with a possible alliance between radical Islamic groups. In regard to the latter, Ackerman and Bale (2012) identify a shared interest in anti-Zionism, anti-imperialism, and anti-globalization, with focus on a future utopia. It would seem, nevertheless, that operational support between the two ideological entities is rare. From 1980 to 2008, they found 22 cases of leftist and radical Islam collaboration, with the majority taking the form of rhetoric. While they do conclude that collaboration between left-wing and other ideological groups is possible, it has and will likely remain rare.

The element that is most likely to influence the future of left-wing terrorism in the United States, and thus have repercussions for ideological alliances, is the role that females play in the movement. As noted, leftists have consistently relied on female participation, more so than other ideologies. The political climate may be an influence in increasing numbers. As Cunningham (2007:122) predicts, "if the conservative agenda gains juridical success in limiting certain freedoms for women, especially with respect to abortion, then there is the possibility women could radicalize in the United States in similar ways to anti-abortion groups." The author maintains that the radical environmental and animal rights movement is poised for enhanced female recruitment, particularly within leadership roles. Cunningham (2007) cites the Animal Liberation Front's booklet titled "Arson-Around with Auntie ALF," which shows a woman participating in arson at a McDonald's outlet. This research notwithstanding, whether a larger female membership base and/or women in position of power will expand the left wing's focus to broader social and economic inequalities has yet to be determined. However, this development is certainly more amenable to an overlap of the traditional left wing with the radical eco-movement than, say, with radical Islamists.

Conclusion

Despite a decrease in recent activity, the left-wing terrorist movement remains an important topic in the study of terrorism. It represents a movement that has undergone a metamorphosis, yet may very well be poised to come full circle in its own development. Perhaps more significantly, left-wing terrorism has been successfully combated in many ways by federal and local enforcement. It is through examining these successes that the left-wing threat, regardless of what combination of ideologies it becomes in the future, can be adequately addressed.

Notes

1 Although this chapter starts with a discussion of groups in the 1960s, there were other left-wing attacks that preceded the traditional movement, including the assassination of President McKinley in 1901.
2 It should be noted that these estimates are drawn from a sample of federal prosecutions rather than an incident-level database, which may have led to their overrepresentation.
3 All figures are from the Global Terrorism Database, which can be accessed at gtd.umd.edu. See LaFree and Dugan (2007) for a full review of these data.
4 Again, figures in this section are taken from the Global Terrorism Database.

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Assessing Aerial Hijacking as a Terrorist Tactic

Susan Fahey

Introduction

This chapter focuses on airline hijackings committed by terrorists. Jenkins (1975) famously wrote that "terrorism is theater" (p. 16), and no tactic demonstrates this better than aerial hijacking. Aerial hijackings are usually conducted for three reasons. First, planes are sometimes hijacked for transportation, often to a destination to which it is difficult or impossible to gain access via ordinary air travel (e.g., from the United States to Cuba). Second, some offenders hijack planes to extort large sums of money. Finally, planes are hijacked by terrorists for political reasons. Terrorist hijackings have been defined as aerial hijackings conducted for the purposes of "obtain[ing] a political, economic, religious or social goal through fear, coercion or intimidation" (Fahey, LaFree, Dugan, & Piquero, 2012, p. 577). Terrorist hijackings are often very interesting to the general public, media, and criminologists.

In the modern era, the taking and using of an airplane to coerce a target government to meet terrorists' social, political, or logistical demands is often a high-profile event, covered by the media in many countries. In the relatively rare cases when the hijacking turns into an extended hostage situation or when planes are used as weapons in high-casualty events, as in the case of 9/11, media are likely to cover the event even more extensively and provide publicity for the group or individuals perpetrating it. This publicity often advertises the demands and ideology of the group or individuals perpetrating the terrorist aerial hijacking, and could be the reason this tactic is used in terrorism (Hoffman, 1998).

As noted, hijackings can be categorized according to the hijackers' demands.[1] Although hijackers sometimes make multiple demands (see Fahey et al., 2012, on this point), many could be categorized as primarily for transportation, extortion, or terrorist purposes. An interesting transportation hijacking occurred on October 29, 1972, when four men killed one airport employee and wounded another in the process of storming and taking control of an Atlanta, Georgia-bound flight at Houston Intercontinental Airport. They demanded passage to Cuba; three of the four men were eventually apprehended and sentenced to prison for the crime (Aviation Safety Network [ASN], n.d.; Federal Aviation Administration, n.d.).

A notable extortion hijacking occurred on May 5, 1972, in which a man hijacked a flight scheduled from Allentown, Pennsylvania, to Dulles International Airport outside of Washington, DC. He demanded a ransom of US$303,000 and six parachutes, and eventually parachuted out of the flight and was soon apprehended (ASN, n.d.). More than 1,000 hijackings of all types have occurred around the world, and at least 11% can be classified as terrorist hijackings (Fahey et al., 2012).[2]

A Brief History of Aerial Hijackings

The first known aerial hijacking occurred on February 21, 1931, when a private aircraft and pilot in Peru were commandeered by a group of Peruvian revolutionaries. They held the pilot hostage for 10 days before releasing him (ASN, n.d.).

Aerial hijackings reached their highest levels between the mid-1960s and the early 1970s. Most of these were terrorist hijackings. Dugan et al. (2005) documented the downturn in non-terrorist hijackings, which they largely attributed to the introduction of metal detectors and other target-hardening policies in the United States in 1973. They suggested that these American target-hardening policies prevented extortion hijackings and transportation hijackings to Cuba and elsewhere, as they made it more difficult to complete the hijacking. Only the most committed and resourceful terrorist hijackers were not deterred by these measures.

Terrorist hijackings seemed to increase in importance, media coverage, and public consciousness during this same period, largely owing to several spectacular incidents. For example, on July 22, 1968, members of the Popular Front for the Liberation of Palestine (PFLP) hijacked an Israeli El Al flight from Italy to Israel to trade the passengers for Palestinian militants imprisoned in Israel (Hoffman, 1998). This dramatic event played out on the world stage. It demonstrated how civilian international aviation travelers, who often were citizens of nations uninvolved in these conflicts, were used to coerce target governments to make policy changes.

Around two years later, on September 6, 1970, the PFLP conducted four coordinated hijackings to demand the release of PFLP members from Switzerland, Israel, Great Britain, and West Germany. One of the hijacked planes originated in Germany, one in Switzerland, and two left from the Netherlands. All four planes were bound for New York City. Three of the planes were successfully hijacked and two of these were diverted to Dawson's Field, a desert airstrip in Jordan, while the third was flown to Cairo, Egypt. The fourth hijacking was thwarted by the pilots and crew, killing one of the hijackers and allowing the second, a woman named Leila Khaled, to be captured. Khaled attracted a great deal of media attention due to her participation in this failed hijacking. A few days later, a fifth plane was hijacked and also diverted to Jordan. The passengers from the Cairo plane were released, although the plane itself was destroyed. Meanwhile, the hostages from the Dawson's Field planes were deplaned. Many of the women and children were released early on in the hostage drama, which lasted for more than two weeks. Several press conferences were held, during which all three planes were destroyed on camera. All hostages were eventually released, but many of the hijackers' demands were granted by the target nations (Dobkin, 2005).

The Palestinian nationalist cause became widely publicized on the international stage because of these dramatic, international hijackings. Expanded commercial travel and the increased immediacy of television news coverage as compared with newspaper reporting

resulted in widespread awareness of the Israeli–Palestinian conflict (Hoffman, 1998). In turn, the public began to associate aerial hijacking with terrorism, rather than the transportation and monetary extortion hijackings of the past.

Aerial hijacking was thus viewed as an end in itself, and a quite impactful one at that. The strategy was to take over the plane and use the passengers and crew as bargaining chips. The plane itself was used to transport and contain the hostages. On September 11, 2001, al-Qaeda launched four coordinated aerial hijackings that would change the face of aerial hijacking forever. The innovation of the attacks on 9/11 was to use the planes themselves as weapons. The hostages were now no longer viewed as a bargaining tool but as secondary to the real aim, which was to destroy iconic targets and cause widespread destruction.

All four of the 9/11 flights originated in and were bound for American cities: American Airlines Flight 11 from Boston to Los Angeles (92 onboard); United Airlines Flight 175 from Boston to Los Angeles (65 onboard); American Airlines Flight 77 from Washington, DC (Dulles) to Los Angeles (64 onboard); and United Airlines Flight 93 from Newark to San Francisco (44 onboard). All four flights departed within 41 minutes of one another ("Timeline of Events from September 11, 2001," 2006).

By 8:46 a.m., only five minutes after the fourth flight had departed, American 11 was intentionally crashed into the North Tower of the World Trade Center; at 9:03 a.m., United 175 crashed into the South Tower. At 9:12 a.m., at least two passengers onboard American 77 alerted their loved ones that their flight had been hijacked (9/11 Memorial, n.d.). American 77 was flown into the Pentagon at 9:37 a.m., killing 125 inside the building and seriously injuring another 106. By 9:57 a.m., 13 of the passengers onboard United 93 contacted loved ones to inform them of the plane's hijacking. At least six of the passengers were reported to have been informed of the attacks on the World Trade Center and the Pentagon (9/11 Memorial, n.d.). At 9:59 a.m., the South Tower collapsed in 10 seconds. At 10:03 a.m., United 93 crashed in a field in Somerset County, Pennsylvania, only 20 minutes by air from the District, killing all onboard. Reports circulated that the passengers tried to overpower the hijackers and prevent the plane from being crashed into a building in Washington, DC, a target widely speculated to be the US Capitol. At 10:28 a.m., the North Tower collapsed. All told, approximately 2,000 people in the Towers were killed in the collapses, 600 in the South Tower and 1,400 in the North Tower (9/11 Memorial, n.d.). The planes were hijacked by only 19 hijackers, some of whom may have been armed with box cutters or small utility knives, although it is not entirely clear how the hijackings were each conducted (National Commission on Terrorist Attacks, 2004; Ahlers, 2004).

The events of 9/11 took an estimated 2,977 lives, including those onboard the four planes. As noted, in these hijackings, the planes were not used to transport and hold passengers hostage, nor were there attempts to bargain with the passengers' lives for concessions to the terrorists' agenda, such as policy changes or prisoner releases. Rather, the hijacked planes were used as weapons to take down iconic American buildings. In the words of the National Commission on Terrorist Attacks (2004), the planes were hijacked and turned into "large guided missiles, loaded with up to 11,400 gallons of jet fuel" (p. 4). The hijacked planes functioned as weapons to increase the casualty count to a greater degree than obtainable by traditional weapons (such as firearms and ordinary explosives), and to increase the level of physical destruction. Although 9/11 changed the public view of hijacking forever, the image of the terrorist hijacker using passengers as pawns to bargain with target governments persists in the public imagination (Martin, 2013).

Offender Decision-Making: Rational Choice Theory

Rational choice theory (RCT; Cornish & Clarke, 1986) is probably the most common criminological theory applied to test arguments about aerial hijacking, and it is well suited to guide crime prevention efforts. Specifically, RCT posits that actors are goal-oriented and behave within the context of bounded rationality, weighing the known, perceived costs and benefits of an action and alternative actions, to satisfy their self-interests. Applied to hijacking, the weighing of costs and benefits is likely to involve the short-term and long-term goals of the individual or group hijacking the plane.

The short-term objectives are offense-specific. In a hijacking, the short-term goals of the offenders may be to control the plane by neutralizing the pilots and other flight crew, threatening the passengers into submission, and flying the plane to an alternate destination. These short-term goals may also be used to coerce long-term goals out of a government, a set of governments, or civilians of a target government. The long-term goals include using the plane and its hostages to change government policy, to negotiate their own release, or to coerce a prisoner release, often members of their organization or ideological movement.

Policy changes may be short term or long term. A short-term goal may be the hijacking of a plane to distribute propaganda, such as for Croatian independence in a September 10, 1976, hijacking of a flight from New York's LaGuardia Airport to Chicago O'Hare International Airport (ASN, n.d.). Long-term goals may include those demanded by the hijackers of TWA 847, the Rome-bound flight that originated in Athens, Greece, on June 14, 1985. The two hijackers, believed to be Hezbollah operatives, demanded an international prisoner release, an immediate withdrawal of Israeli forces from southern Lebanon, and international condemnation of the United States and Israel (ASN, n.d.; Smith, 2001).

Cornish and Clarke (1986) designed rational choice models to be specific to the individual and offense type, and, thus, the theory was difficult to test as it was information-intensive, requiring a great deal of information on the decision-making process and considered factors of individuals. However, RCT was used in criminology to provide a backdrop for understanding criminal events and crime prevention.

Cornish and Clarke's (1986) application of RCT sets forth a series of four models that function as heuristic devices to guide understanding. Most or even all offenders may not contemplate whether to offend using the exact models suggested by Cornish and Clarke (1986). Instead, the models provide general guidelines about what may be important to offenders when deciding whether to become involved in crime, which crimes to commit, and whether to persist or desist in committing crimes. The four models include: the involvement, event, persistence, and desistence models.

The first model addresses involvement, specifically, whether to engage in crime. Cornish and Clarke (1986) suggest that individual psychological profiles, childhood experiences, socioeconomic status, prior experiences with crime and law enforcement, self-perceptions, general needs, pros and cons of alternative solutions, the number of solutions perceived to exist, and personal readiness to commit crime *may* be factors that come into play when individuals contemplate committing crimes, including aerial hijacking.

Cornish and Clarke's (1986) second model is the event model, consisting of the factors that offenders may contemplate when choosing a crime type and, then, when choosing the specific targets against which to offend. For example, an organization such as the PFLP, which also engaged frequently in non-hijacking terrorism, likely chose to engage in hijackings after weighing the costs and benefits of this offense type relative to other terrorist attacks, such as an armed assault on an airport. Some advantages of an aerial hijacking

relative to other types of attacks might be the high likelihood of international press coverage. Another benefit might be to coerce governments to free prisoners or make policy changes. In fact, Dobkin (2005) reported that a fifth plane seized during the September 1970 hijacking described earlier was specifically taken to increase the number of British hostages to provide better negotiating power with the British government.

However, hijackings also present their own unique costs, which have to be considered. For example, depending on the skills and resources of the hijackers, taking and maintaining control of the crew and passengers may be difficult. It may be challenging to keep the plane in flight or land it if the pilots are incapacitated or killed. Passengers and crew can fight back and kill or wound the hijackers; governments can destroy planes, attempt to storm planes, refuse to negotiate, or kill hijackers. Thus, hijacking is a potentially costly tactic but also one that has the potential for high rewards.

Also included as part of the event model is target selection (Cornish & Clarke, 1986). Once the hijackers have chosen the tactic, a specific target also must be chosen. Some factors that hijackers might consider here include targeting a symbolic airline, such as El Al, the Israeli airline. Also, attacking a flight from a place of origin that is either symbolically or logistically important, or attacking a flight with greater or fewer persons of specific nationalities (or other social demographic considerations), could be attractive during target selection. These are just some of the potential considerations. The ease of use of weapons, the likelihood of procuring weapons, the perceived probability of successfully carrying the weapons onboard, and the success of any flight training may also be considered. Once a tactic and a target have been chosen, the hijackers may offend along the lines described in the preceding text.

If the event model resulted in offending, then the next step in RCT is the fourth model, persistence, in which offenders must decide whether to continue offending (Cornish & Clarke, 1986). The persistence model varies based on the individual and offense type. But some factors that hijackers might consider include whether they have become more accomplished and skilled, whether they have changed their lifestyle to accommodate the criminal/terrorist identity, and whether they have acquired a criminal/terrorist peer group. If yes, the individuals may continue to offend.

Finally, Cornish and Clarke (1986) specified a model of potential desistance factors, either from offending completely or from a specific offense type, such as hijacking. The hijackers might think about whether the last offense was successful, or whether they lack the readiness to continue offending. The occurrence of major external events—such as marriage, or the availability of legitimate and illegitimate alternatives, such as protest and formation of a political party (legitimate), or switching to a different type of terrorist tactic (illegitimate)—may also be involved in the desistence model.

RCT was generally well received by criminology. It allowed government personnel and academics to "think like offenders" to understand why they committed that specific offense relative to another (such as why hijacking was used rather than placing an explosive). It also allowed the field to understand the benefits that offending provided offenders, by explicitly enumerating them.

Further, the models focused on the costs of the crime and thus highlighted factors that could be used to deter and prevent aerial hijacking. For example, hijackers may want to keep the risk of the offense being foiled and the risk of apprehension low, and hence might avoid airports with more rigorous screening procedures, such as when American airports introduced metal detectors, which was followed by a significant decline in non-terrorist hijackings (Dugan et al., 2005). Thus, the prospects of formal apprehension might be a

deterrent. Informal punishments may also act as important deterrents, such as fighting with a spouse, punishment by a parent, or losing a job. Both formal and informal punishments and manipulation of the crime situation to change the probability of the benefits of the offense were theorized to affect the likelihood of future hijackings.

Chauncey (1975) examined the degree to which changes in the certainty and severity of punishment affected the rate of hijackings. He collected data on hijackings around the world from 1961 until June 30, 1973. He examined whether hijacking attempts were sensitive to changes in the certainty of punishment, as measured by the creation of a Cuban policy to send US-origin, Cuba-bound hijackers back to the United States to face prosecution, an effort to increase the rigor of screening passengers departing from American airports, and the introduction of metal detectors in American airports. Chauncey found that the hijackings were sensitive to the introduction of these increases in the certainty of punishment.

Chauncey (1975) also investigated the effects of changes in the severity of punishment, captured as an American law making hijackings punishable by up to 20 years in prison or by the death penalty, and a well-publicized American case in which a hijacker was sentenced to 45 years in prison. He determined there was no effect of these increases in the severity of punishment on the rate of hijackings. He also examined the combination of certainty and severity, the introduction of armed sky marshals who had been authorized to use deadly force on flights, and found no effect. Chauncey concluded, much like the rest of the deterrence literature (Nagin, 1998) and Beccaria (1764) himself, that certainty of punishment mattered more than its severity. However, this study was limited by its concentration on a selection of American and Cuban policies and its narrow time window.

Dugan et al. (2005) examined the occurrence of aerial hijackings around the world from 1931 to 2003 using a rational choice model. They queried whether increasing the certainty of apprehension, the adoption of metal detectors in American airports, and tighter screening procedures in American airports decreased the hazard of hijackings. They established that, in fact, the adoption of metal detectors in American airports significantly decreased the hazard of a hijacking overall—from American airports of origin, from non-American airports of origin, for transportation hijackings to Cuba, and for other non-terrorist hijackings. The adoption of metal detectors in American airports did not, however, decrease the hazard of terrorist hijackings. This finding suggested that the terrorists who conducted hijackings in their sample were less likely to be deterred by the increased certainty of apprehension (flights that originated from American airports). Further, the tighter screening procedures failed to significantly decrease the hazard of hijackings, save for those that originated from non-American airports.

Dugan et al. (2005) also tested whether transportation hijackings to Cuba were affected by the February 1973 policy that made hijacking planes to Cuba a crime there—a measure that presumably increased certainty of punishment. The authors determined that the hazard of Cuba-diverted and American-origin hijackings were significantly decreased following the adoption of that policy, demonstrating that manipulating the costs and benefits of an offense can result in crime prevention, as RCT too suggested.

Dugan et al. (2005) hypothesized that factors affecting the probability of accomplishing the attack—and, thus, receiving the benefits of the attack—affected the hazard of future hijackings. They found that, when the prior two hijackings occurred closely clustered in time, the hazard of another hijacking increased. Similarly, the hazard of another hijacking increased when the prior three hijackings were successful and were clustered close in time. Taken together, these results indicated that hijackers were more likely to offend when they believed that the likelihood of success was higher.

Dugan et al. (2005) demonstrated important empirical support for the utility of RCT, and, by extension, crime prevention techniques designed to manipulate the costs and benefits of aerial hijacking. This was important support as it endorsed the notion that aerial hijackers were rational, goal oriented, and responsive to changes in the likelihood of costs and benefits (see also Enders & Sandler, 2006).

Hsu and Apel (2015) extended similar support for the situational perspective of crime analysis and prevention in the context of terrorist aerial hijackings and other aviation-related terrorism. They examined, first, whether the introduction of metal detectors in US airports (which quickly diffused to airports around the world) decreased terrorist aerial hijackings and other types of aviation-based terrorism, such as explosives placed on planes.

Using the Global Terrorism Database (GTD), Hsu and Apel (2015) identified 21 terrorist organizations and generic ideological groupings, such as Croatian nationalists, that conducted at least one aviation attack between 1970 and 1973. They extracted these organizations' aviation and non-aviation terrorist attacks from 1970 to 1977 to populate the intervention and displacement analyses. There were 21 hijackings, 43 non-hijacking aviation attacks, and 1,073 non-aviation attacks from 1970 to 1977 by the selected 21 organizations included in the analyses.

Using an interrupted time series design, Hsu and Apel (2015) found that there was a sizable reduction in terrorist aerial hijackings in the years after the introduction of metal detectors in US airports. During the pre-intervention period, there was an average of one aviation attack per month, but after metal detectors were introduced, the average number of attacks declined to 0.4 attacks per month. There was also a small decrease in non-hijacking terrorist attacks against aviation targets though this effect failed to attain statistical significance.

Hsu and Apel (2015) also tested the occurrence and frequency of displacement and diffusion. After the introduction of metal detectors, they examined whether there were measurable shifts in attacks by the chosen terrorist groups away from the now target-hardened airports and airlines to different attack types, target types, or using different weapon types. Increases in non-hijacking attacks, against non-aviation targets, or using different weapons than used in aviation attacks, would be evidence of displacement, while decreases would be evidence of diffusion of benefits.

Some of the observed changes in attacks by the 21 groups in the post-intervention period (1974–1977) included a diffusion of benefits for assassinations (fewer attacks), and displacement to infrastructure attacks (more attacks). Diffusion effects were observed with diplomatic targets, but displacement effects for police, private citizens, and transportation targets. For weapons, they observed a diffusion effect for explosives and a displacement effect to incendiaries. Hsu and Apel (2015) determined that displacement and diffusion were present in some attack, target, and weapon types after the introduction of metal detectors in US and other airports, but that often the effect sizes were either quite small or the coefficients failed to attain statistical significance. Hsu and Apel (2015) found clear support for the utility of situational crime prevention when applied to terrorist aerial hijacking and other forms of hijackings.

The Crime Situation: Routine Activities Theory

Routine activities theory (RAT; Cohen & Felson, 1979) has also guided crime prevention efforts in general and has promise for better understanding aerial hijacking. Cohen and Felson assumed that actors are rational, goal-oriented, seek to satisfy their self-interests,

and are willing to do so via crime. Crime is likely to occur when motivated offenders converge in time and space with suitable targets, in the absence of capable guardians. Their assumptions include that there is a steady stream of motivated offenders, and they later theorized that motivated offenders would be less likely to offend in the presence of conventional intimate handlers, prosocial others with whom the offenders have a preexisting relationship, such as parents or significant others (Felson, 1986). Yet, Cohen and Felson failed to specify much else about motivated offenders. Suitable targets are defined by offenders, but it is likely that unattended electronic equipment or vulnerable persons who look unable to defend themselves may be attractive to many. Finally, capable guardians are persons or things associated with suitable targets that may protect them from being offended against; for example, a deadbolt may protect a house from being broken into, while a bystander may prevent a person from being assaulted.

RAT can best be used to guide crime prevention efforts when academics and government personnel "think like offenders" to find what factors make a target more or less suitable and what characteristics comprise a more or less capable guardian. For example, a plane leaving from an airport that is well known for lax security procedures might be a more suitable target. A plane with fewer passengers might make a more suitable target by decreasing capable guardianship, or it might be a less suitable target due to the fewer hostages at risk if the hijackers negotiate with authorities. A motivated offender in the context of a hijacking is likely an individual who is a member of an organized terrorist group, or a lone offender acting on behalf of a particular ideology.

Fahey et al. (2012) used a situational approach derived from RAT and RCT to examine the degree to which terrorist hijackings could be differentiated from non-terrorist hijackings (i.e., largely transportation and extortion for money), based on characteristics of hijacking events. Their data consisted of 1,019 hijackings around the world from 1948 to 2007, 122 of which were classified as terrorist hijackings following the definition in Dugan et al. (2005).

Fahey et al. (2012) divided the criminal event characteristics into two types: those that may garner publicity for a particular cause, and those characteristics that might be a reflection of greater resources, and thus could have signified that a terrorist organization perpetrated it. The publicity variables included whether the flight originated in the United States, in a capital city, on a weekend, in the summer, and whether there were any casualties, all of which might be expected to increase press coverage. Resource characteristics included whether no weapons were used, one type of weapon was used, or multiple types of weapons were used. For example, firearms and explosives constituted multiple weapon types, whereas multiple firearms were considered to be one weapon type. The researchers hypothesized that greater numbers of weapon types reflected greater resources. The second resource variable was the number of hijackers, with more hijackers reflecting greater resources. The researchers also controlled for whether the flight originated in a country in the top 75th percentile of terrorist attacks that year (hot spots), and the year the hijacking occurred.

The results of Fahey et al. (2012) supported the notion that terrorist hijackings could be differentiated from non-terrorist hijackings using the characteristics of the criminal event. Their results demonstrated only partial support for the publicity hypothesis; only flights originating from a capital city were significantly more likely to have been terrorist hijackings. Flights originating in the United States were significantly *less* likely to have been hijacked for terrorist purposes, which at least partially reflected the many transportation hijackings originating in the United States and bound for Cuba, the Eastern bloc, or China.

The organizational resources hypothesis was well supported (Fahey et al., 2012). Terrorist hijackings were more likely to be carried out with a weapon and, separately, with more than one weapon type, such as explosives and firearms, than non-terrorist hijackings. Further, hijackings with greater numbers of hijackers were more likely to be terrorist as well. Interestingly, the control variables demonstrated that terrorist hijackings were more likely to have originated from terrorist attack hot spots, possibly exhibiting support for the notion that hijacking was one tool used by terrorist groups who also engaged in other terrorist tactics. Finally, the total number of terrorist hijackings varied over time. In short, Fahey et al. demonstrated support for the situational perspective, that the criminal event has analytical importance in understanding crime and terrorism.

Examining Terrorism as a Tactic

Hijackings over Time

To better understand aerial hijacking as a terrorist tactic, it is useful to examine the incidence and characteristics of the phenomenon over time. Although other databases on aerial hijacking exist (see Dugan et al., 2005; Fahey et al., 2012; ASN, n.d., among others), none of these focus exclusively on aerial hijackings for terrorist purposes; instead, they include all types of hijackings, terrorist as well as those perpetrated for transportation or monetary extortion purposes.

In contrast, the Global Terrorism Database (GTD) includes only those hijackings that fit its definition of terrorism (LaFree, Dugan, & Miller, 2015). Reports of attacks are gathered from open-source media, including English and foreign-language local, regional, national, and international news sources. Common sources include news wires (e.g., Reuters), *The New York Times*, *BBC News*, and opensource.gov. GTD defines terrorism using a set of multiple criteria. All of the following criteria must be met for an attack of any type to be included in the database:

> [1] The incident must be intentional—the result of a conscious calculation on the part of a perpetrator. [2] The incident must entail some level of violence or threat of violence—including property violence, as well as violence against people. [3] The perpetrators of the incidents must be sub-national actors. The database does not include acts of state terrorism. (Global Terrorism Database Codebook, 2014, p. 8)

Furthermore, at least two of the following criteria must be met for an attack to be included in the data (GTD Codebook, 2014):

> *Criterion 1*: The act must be aimed at attaining a political, economic, religious, or social goal. In terms of economic goals, the exclusive pursuit of profit does not satisfy this criterion. It must involve the pursuit of more profound, systemic economic change. *Criterion 2*: There must be evidence of an intention to coerce, intimidate, or convey some other message to a larger audience (or audiences) than the immediate victims. It is the act taken as a totality that is considered, irrespective of whether every individual involved in carrying out the act was aware of this intention. As long as any of the planners or decision-makers behind the attack intended to coerce, intimidate, or publicize, the intentionality criterion is met. *Criterion 3*: The action must be outside the context of legitimate warfare activities. That is, the act must be outside the parameters permitted by international humanitarian law (particularly the prohibition against deliberately targeting civilians or non-combatants). (p. 8)

For each attack identified from the open-source media and coded as meeting all three mandatory criteria and at least two of the three latter criteria, the incident is coded on a variety of dimensions, including the perpetrator (if known), the location of the attack, the date, the type of attack (up to three types of attack for multi-modal attacks), the nationality and type of target (up to three recorded targets), and other details (GTD Codebook, 2014).

Hijacking is defined in GTD as "taking control of a vehicle such as an aircraft, boat, bus, etc., for the purpose of diverting it to an unprogrammed destination, force the release of prisoners, or some other political objective" (GTD Codebook, 2014, p. 23).[3] I removed all hijackings that did not directly target an aircraft. Both commercial and non-commercial aircraft are included. GTD does not require that hostages be taken or be available to be taken in the course of taking control of the vehicle. However, the majority of hijackings in the GTD did involve hostages (National Consortium for the Study of Terrorism and Responses to Terrorism (START), 2014).

Figure 21.1 shows terrorist hijackings (left axis) plotted against terrorist attacks of all types from 1970 to 2013. There were 275 hijackings included (START, 2014). However, importantly, the first aerial hijacking long predated the beginning of the GTD in 1970, and all terrorist hijackings before 1970 were thus not included here.[4] The number of terrorist hijackings was highly variable over time. By 1970, hijackings were still very common (Hoffman, 1998), averaging 10 or more per year. From then, hijackings changed erratically until the series high of 22 hijackings in 1994. From that peak, the number of hijackings declined rapidly and fairly steadily. There were no aerial hijackings recorded in 2005 and 2006, five recorded in 2007, only one to three hijackings from 2008 until 2012, and none in 2013.
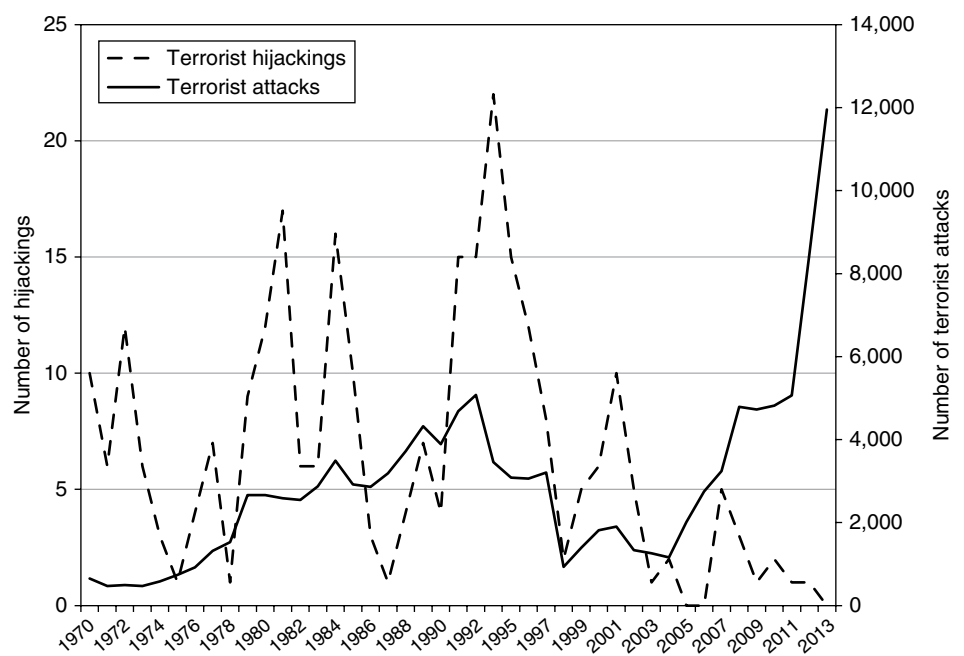
Figure 21.1   Terrorist Hijackings and Terrorist Attacks Over Time

The number of terrorist attacks followed a relatively dissimilar path. There were 125,087 terrorist incidents of all types from 1970 to 2013. The two series show a correlation that is weakly negative ($r = -0.08$). While the annual number of terrorist hijackings fluctuated a good deal during the 1970s, the number of terrorist attacks rose steadily to 5,078 attacks in 1992. This was followed by a relatively steep decline during the late 1990s, which coincided with a change in data collection agencies and methodology (see LaFree et al., 2015, for more on this, especially how the number of data collection resources and changes in those resources affect the number of terrorist incidents collected). By 2005, the number of terrorist attacks had increased, due in large part to increasing numbers of attacks from the wars in Iraq and Afghanistan. The series ended on a high in 2013 with 11,952 attacks, in stark contrast to the increasingly infrequent terrorist hijackings in the same time period.[5]

It is clear from comparing both the number of hijackings and the number of terrorist attacks around the world that aerial hijackings are rare events. In fact, aerial hijackings comprised only 0.22% of the total attacks recorded in the GTD from 1970 to 2013 (START, 2014; LaFree et al., 2015).

Locations of Hijackings

The country/location of the hijacking was coded as the country of most recent departure or the ground location of a mid-air explosion. The region of the hijacking was coded from the country field (LaFree et al., 2015). Although the recorded country of the hijacking could be somewhat arbitrary with respect to hijackings—with multiple departures or a mid-air explosion—general patterns were still gleaned from these data.

Table 21.1 displays the regions for the 275 aerial hijackings examined here. The Middle East and North Africa region accounted for just over 25% of the 275 aerial hijackings from 1970 to 2013. This was unsurprising, given the history of aerial hijackings outlined earlier. Roughly similar proportions of terrorist aerial hijackings occurred out of Western Europe

Table 21.1 Region of Aerial Hijackings

Region	Frequency	Percentage of Total Hijackings
Middle East and North Africa	70	25.36%
Western Europe	39	14.13%
South America	38	13.77%
Sub-Saharan Africa	28	10.14%
South Asia	21	7.61%
East Asia	16	5.80%
North America	16	5.80%
Russia and NISs	15	5.43%
Central America and Caribbean	13	4.71%
Southeast Asia	11	3.99%
Eastern Europe	4	1.45%
Central Asia	3	1.09%
Australasia and Oceania	1	0.36%
Total	**275**	**100%**

(14%), South America (13%), and sub-Saharan Africa (10%). The rest of the regions each accounted for less than 10% of the 275 terrorist aerial hijackings.

Perpetrators of Aerial Hijackings

Perpetrators of aerial hijackings have not always acted on behalf of a known, identified group, nor are they always identified. For 124 hijackings (45% of hijackings), the perpetrators were unknown or unidentified in the open-source reporting. For 22 hijackings (8%), the perpetrator was identified as an individual (either named or unnamed) or assigned only a generic identity description[6] (e.g., Bosnian refugee). A further 54 hijackings (18%) were perpetrated by groups or individuals who were identified on some dimension, such as an identity characteristic, action in a generic criminal or activist group, or political or religious beliefs. For example, narco-terrorists were identified in three aerial hijackings, Palestinians in four, Sikh extremists in three, and students in two. Nothing else was known about the hijackers other than the "membership" in these groupings. Finally, approximately 28% of aerial hijackings were conducted by terrorist organizations identified in the open-source-media accounts of the hijacking (START, 2014).

Table 21.2 contains organizations listed as perpetrators of more than one aerial hijacking recorded in GTD.[7] These organizations were largely well-known terrorist organizations (who also perpetrated other non-hijacking terrorist attacks), such as the PFLP, Hezbollah, al-Qaeda, M-19, FARC, Abu Nidal Organization, the Taliban, and the Black Panthers. Although hijackings were also perpetrated by lesser-known groups and individuals as demonstrated in the preceding text, when an organization was identified in the open-source media reports of a hijacking, it was often, though not always, a well-known group, though it is possible that at least some of these organizations grew to prominence at least partially from the news coverage of their hijacking terrorist attacks.

Table 21.2   Organizations that have Perpetrated More than One Aerial Hijacking

Name of Organization	Frequency	Percentage of Total Hijackings
National Liberation Army of Colombia (ELN)	5	1.82%
Popular Front for the Liberation of Palestine (PFLP)	5	1.82%
Hezbollah	4	1.45%
Al-Qaeda	4	1.45%
M-19 (Movement of April 19)	3	1.09%
Red Flag (Venezuela)	3	1.09%
Black Liberation Army	3	1.09%
Revolutionary Armed Forces of Colombia (FARC)	3	1.09%
Al Zulfikar	2	0.73%
Abu Nidal Organization (ANO)	2	0.73%
Eritrean Liberation Front	2	0.73%
Black Panthers	2	0.73%
Mujahedin-e Khalq (MEK)	2	0.73%
Brunswijk Jungle Commando	2	0.73%
Taliban	2	0.73%
Islambouli Brigades of al-Qaeda	2	0.73%
Japanese Red Army (JRA)	2	0.73%
Total	**48**	**17.45%**

Table 21.3   Weapons Used in Aerial Hijackings

Weapon Type	Frequency	Percentage of Total Hijackings
Firearms	108	39.27%
Unknown	67	24.36%
Explosives/bombs/dynamite	44	16%
Melee	30	10.91%
Fake weapons	18	6.55%
Incendiary	7	2.55%
Vehicle	1	0.36%
Total	**275**	**100%**

Weapons Used in Aerial Hijackings

Table 21.3 shows the weapons used in terrorist aerial hijackings from 1970 to 2013 from the GTD.[8] Perhaps unsurprisingly, firearms were used in nearly 40% of hijackings. Unknown weapons (i.e., the open sources were unclear about the weapon type used) accounted for 24% of hijackings. Of the hijackings, 16% involved explosives. Melee weapons, which largely involved knives or other sharp objects, were used in just over 10% of hijackings. Fake weapons accounted for 6.55% of hijackings; one such hijacking with a fake weapon occurred on February 7, 2003, in which Ali Ilker Urbak hijacked a plane out of Istanbul, Turkey, claiming to possess dynamite that was actually a bundle of candles tied together to resemble dynamite. He claimed he was doing the hijacking to protest American military action in Iraq. He was arrested shortly after taking two flight attendants hostage, and Turkish police asserted that he was intoxicated. Incendiaries, such as gasoline or alcohol, were used in 2.55% of hijackings. Finally, a plane was used as the first weapon type in one hijacking, that of a 15-year-old boy with alleged al-Qaeda sympathies who stole his flight instructor's plane and crashed it into a Tampa office building.[9]

Fatalities from Aerial Hijackings

Table 21.4 contains data on the distribution of fatalities for recorded terrorist aerial hijackings from 1970 to 2013. Interestingly, as with terrorist attacks generally, slightly more than 80% of hijackings involved no fatalities; 17 hijackings involved only one fatality; while an additional 15 involved two to four fatalities. Only 14 hijackings, a mere 5% of the recorded aerial hijackings, took five or more lives, four of which involved the planes hijacked on 9/11. In fact, if the nearly 3,000 fatalities from 9/11 are excluded, the average number of fatalities per attack was less than two, a relatively low fatality rate compared with some other attack types (LaFree et al., 2015, p. 141).

Conclusion

In this chapter, recent literature on aerial hijacking was synthesized as a terrorist tactic. First, a brief history of aerial hijacking was provided, with special attention paid to high-profile hijackings such as those conducted by the PFLP and al-Qaeda. Then, the especially relevant criminological theory, rational choice and routine activities theories, and research

Table 21.4   Fatalities from Aerial Hijackings

Number Killed	Frequency	Percentage of Total Hijackings
0	222	80.73%
1	17	6.18%
2	4	1.45%
3	4	1.45%
4	7	2.55%
5 or more	14	5.09%
Unknown	7	2.55%
Total	**275**	**100%**

on aerial hijacking using those theories were reviewed. Next, GTD terrorism data was used to examine aerial hijackings from 1970 to 2013. The distribution of hijackings over time to terrorist attacks over time, the regions where hijackings took place, and the perpetrators were then compared. Finally, the types of weapons used in aerial hijackings and the number of fatalities in hijackings were examined.

This research demonstrated the varied ways in which terrorist hijackings have manifested since 1970. When terrorist organizations chose to use this tactic to achieve their goals, they may have done so in a way that was amenable to the type of decision-making described by rational choice and/or routine activities theory. As described in the preceding text, the terrorist organizations reported to have used the tactic more than once were largely well-known terrorist organizations who committed other terrorist attacks. For some terrorist organizations, it was possible that aerial hijacking was simply another tool used to further accomplish their political, social, economic, or religious agenda. In addition, the majority of hijackings involved the use of a weapon. Finally, perhaps surprisingly, the vast majority of hijackings did not result in any fatalities.

Notes

1   The plural form of "hijacker" is used here for linguistic simplicity when referring to hypothetical hijackers. This is meant to include both singular and plural hijackers of planes.
2   Estimates of the total number of terrorist aerial hijackings will vary between sources, depending on the time window of included data and the definitions of terrorism and aerial hijacking.
3   GTD allows for up to three methods of attack for any single attack. Here, all hijackings against aircraft, where hijacking was used as a method of attack for any of these three recorded attack types, have been included. There were only 11 cases, however, where multiple attack methods were used, and one of them was hijacking (attacktype1, attacktype2, attacktype3; GTD Codebook, 2014). All attacks in which an aircraft of some form—private or commercial, airplanes or helicopters— was not hijacked have been excluded.
4   The data used in this research were downloaded on January 15, 2015. The GTD is missing data for 1993. The original hard-copy data were lost in an office move, and were never recovered.
5   The GTD has used different data collection regimes during the last 10 years, and this has likely affected the number of terrorist attacks identified and recorded each year. Changes in the number of attacks from year to year may reflect these methodological changes.
6   LaFree, Dugan, and Miller (2015) defined *generic groupings* as perpetrators of terrorist incidents where "no formal organization claimed responsibility or was identified by authorities or witnesses, but sources do provide some general information about the identity of the perpetrators … [such as]

the ideology of the perpetrators (e.g., Sikh extremists, left-wing militants), their origins with respect to location or ethnicity (e.g., Palestinians, East Timorese), or the general characteristics of the attackers (e.g., dissident students, disgruntled farmers)" (pp. 79–80).

7   This lists data for the first group name associated with each hijacking.
8   This presents data only for the first weapon mentioned.
9   The hijackings of 9/11 are coded first as melee weapons, second as vehicle weapons, and third as incendiary weapons.

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Evolution of Suicide Attacks

Ami Pedahzur and Susanne Martin

Introduction

Over the last decade and a half, suicide operations[1] turned from an obscure phenomenon that only a handful of scholars addressed to a focal theme in the research on political violence. The exhaustive research effort into the issue has generated hundreds of academic publications and ignited heated debates among scholars. In this chapter, we portray the recent evolution of the research in the field by drawing attention to some of these debates. We begin by introducing the different challenges of conceptualizing the phenomenon, and go on to identify the respective theoretical implications of each challenge. We then discuss the main methodological issues that are associated with studying suicide attacks. In the remainder of the chapter, we discuss the various debates within this area of study. First, we present the overarching debate about the roles of culture and religion in incentivizing and facilitating suicide operations. Second, we introduce the group-level approach and the debates that persist among scholars focusing their study at the level of militant groups. In particular, we focus on the following questions. Do suicide attackers operate within organizations or networks? Is there a strategic logic behind suicide operations? If so, is it complemented by a political logic? Third, we address debates regarding the individual motivations of suicide attackers. We begin with the dispute over the question of whether suicide attackers are suicidal. Next, we assess the extent to which economic and societal variables contribute to the decisions of individuals to kill themselves as a means of killing others. Finally, we evaluate the advances that the scholarly community has made in understanding the phenomenon, and delineate the questions that are yet to be answered.

Conceptual Challenges

The Olympic Games of 1972 will always be remembered for the massacre of 11 Israeli athletes by members of "Black September" (Jenkins, 1975). Even though the terrorists failed to coerce the Israeli government to release their comrades from prison, their operation was

a success in another sense. Actually, the young Palestinians who took over the quarters of the Israeli delegation were not naïve. They had no reason to assume that Israel would give in to their demands. The success of their operation stemmed from their ability to hijack the Olympic Games for an entire day and take advantage of the presence of television crews from all over the world in the Olympic Village. The drama that they orchestrated reached every corner of the globe and placed the grievances of the Palestinian people on the top of the global agenda (Macdonald, 2000; Weimann & Winn, 1994). The main shortcoming of such dramatic events is their diminishing returns. Audiences simply become accustomed to them and, thus, in order to maintain the terrorizing impact, terrorists must always innovate (Horowitz, 2010; Moghadam, 2013).

Over the years, terrorists learned how to apply their disregard for their own survival effectively in order to enhance the theatrical nature of their horrific deeds. Notable examples include the Moscow theater hostage crisis in 2002, the Mumbai attacks of 2008, the Boston Marathon bombings of 2012, the Westgate shopping mall attack in Nairobi in 2013, and the 2015 massacres in Paris. In all of these cases, the perpetrators managed to hijack the world's attention for several days at a time, and to captivate the media and its audiences by carefully setting the stage for a highly dramatic climax. However, so far, no attack has reached the sophistication of al-Qaeda's horrific media production on September 11, 2001. The preparations for the attack were meticulous and extensive. Every aspect of the attack had symbolism. The perpetrators turned modern technology into deadly weapons by learning how to operate and use airplanes as smart bombs. Although the attacks ended within hours rather than days, they managed to undermine the sense of order not only in the United States but also around the world. The 9/11 hijackers proved to the world that, with a commitment to self-sacrifice, they could hit the most significant and symbolic targets of the Western world.

These events had a profound impact on the academic community. The 9/11 attacks legitimized the study of terrorism from academic perspectives and generated hundreds of publications on the phenomenon. Alongside their contributions to the understanding of terrorism and related phenomena, these studies also generated a set of academic problems (Crenshaw, 2007, 2014). In recent years, the terms "suicide" and "terrorism" have become almost inseparable in academic literature. Nonetheless, a search of the Global Terrorism Database (GTD) reveals that suicide operations constituted merely 2% of all acts of terrorism from 1970 to 2013.[2] Therefore, the intense focus on suicide terrorist attacks and the subsequent attempts to use insights from studies of these attacks for explaining other manifestations of terrorism could be causes for concern, or at least reconsideration. An equally significant problem is the fact that, for many studies of suicide terrorism, researchers do not separate suicide terrorist attacks from the suicide attacks that are being perpetrated in the context of warfare.

Separating the two types of operations based on their context is more than an academic exercise. While the term "asymmetric warfare" has become increasingly visible since the 1970s, wars have, in fact, always been asymmetrical (Thornton, 2007). Each party in every conflict in history has had its own relative advantages and shortcomings. Among other things, they varied by numbers of troops, quality of weapons, and armor and competence of the strategists and soldiers (Boot, 2006). The increasing scholarly interest in suicide terrorism led academics to search for historical manifestations of similar phenomena. Yet, in most of the cases they identified, terrorism was absent. Rather, the literature depicted different types of self-sacrificial operations in the contexts of asymmetrical conflicts (Bloom, 2005; Pape, 2003; Reuter, 2004). For instance, the Japanese kamikaze pilots in

World War II and Iran's use of martyrs in its war with Iraq represent situations in which the weaker party in a conventional war chose to sacrifice warriors as a tactic of last resort. In the former case, the Japanese military seems to have known that the sacrifices would not change the outcome of the war (Reuter, 2004). In other instances, militias and rebels who operated under extremely disadvantageous conditions used self-sacrifice as a force multiplier. Examples for this category can be found in the Moro swordsmen (Juramentado) campaign against the Spanish forces in the Sulu Archipelago during the nineteenth century (Dale, 1988; Franklin, 1955) and Hezbollah's guerrilla campaign against the Israeli armed forces in Lebanon in the 1980s and 1990s (Pape, 2003). Finally, both the assassins who operated in the Levant during the eleventh century and the Liberation Tigers of Tamil Eelam (LTTE), who began their operations in Sri Lanka during the 1980s, used self-sacrifice operations in multiple ways (Bloom, 2005). They included the tactic in their guerrilla campaigns, used it for targeted political assassinations, and, in addition, applied it in the context of terrorism (Lewis, 1968).

The horrific nature of contemporary suicide campaigns makes it hard to think about sacrifice operations in a broader context. However, once terrorism is removed from the analysis, self-sacrifice becomes easier to understand. Soldiers in every military undergo training aimed at alleviating their fear of death. As we described, wars are rarely predictable or symmetrical. Soldiers find themselves in situations where giving up their lives in order to save others or to advance a military cause is their only option. Every society glorifies such altruistic behaviors and holds the soldiers who make the ultimate sacrifice as heroes. Thus, the fascination with the sacrificial aspect of the phenomenon of suicide attacks is misplaced.

In summary, as the term "terrorism" became increasingly synonymous with horrific and repugnant acts of violence, it lost much of its academic value as a tool for classifying a sub-type of political violence (Schmid, 2004; Weinberg, Pedahzur, & Hirsch-Hoefler, 2004). Hence, the first challenge is to differentiate terrorism as an academic construct from the popular image that the term evokes. To this end, Bruce Hoffman (2006, 40–41) offered one of the most accurate and dispassionate conceptualizations of terrorism, which he describes as an act that is:

> …perpetrated by a subnational group or nonstate entity. … [It is] the deliberate creation and exploitation of fear through violence or the threat of violence in the pursuit of political change … Terrorism is specifically designed to have far-reaching psychological effects beyond the immediate victim(s) or object of the terrorist attack. It is meant to instill fear within, and thereby intimidate, a wider "target audience" that might include a rival ethnic or religious group, an entire country, a national government or political party, or public opinion in general. Terrorism is designed to create power where there is none or to consolidate power where there is very little.

We can offer a solid academic conceptualization of the phenomenon of suicide terrorism by adding Boaz Ganor's (2001) observation about suicide attacks to Hoffman's definition. Drawing on Ganor, we distinguish suicide attacks by the fact that the death of the perpetrator constitutes a requirement for the success of the operation. While our view reflects a narrow definition of suicide attacks, there are some within the field who accept a broader definition, which may allow attacks to be labeled as suicide attacks in cases in which the perpetrator dies or expects to die, even if this death is not a requirement for the success of an attack. Suicide attacks may be perpetrated by individuals operating under the direction

of an organization or group or by individuals acting alone. In order to be classified as suicide terrorism, however, an attack must also meet the definitional requirements of "terrorism."

Methodological Challenges

Few social phenomena present as many methodological challenges as the study of suicide attacks (Mintz & Brule, 2009). Indeed, scholars in the field often resort to dark humor. They state that they envy their peers who study "regular" militants, since they have opportunities to interview the subjects of their studies. It is obviously impossible to talk to successful perpetrators of suicide attacks; therefore, researchers must settle for unsuccessful ones. However, interviewing perpetrators is not the only methodological challenge for researchers in the field. Actually, it is not even the most formidable one. As soon as the scholarly interest in the phenomenon sparked, researchers realized that they had to familiarize themselves with remote conflicts and exotic cultures and languages, such as Turkish, Kurdish, Chechen, Sinhala, Tamil, Pashto, Dari, and many more (Pape, Feldman, & Chicago Project on Security and Terrorism 2010). In addition, groups that perpetrated suicide attacks were naturally clandestine and did not welcome the presence of foreigners (Bloom, 2003; Merari, 2010). One way to overcome these challenges was to resort to abstract, deductive formal models (Arce & Siqueira, 2014; Azam, 2005; De Mesquita, 2005). More commonly, researchers relied on empirical, quantitative research. Depending on the question being asked and the unit of analysis, researchers required data on numbers of incidents, casualties and fatalities, perpetrators, and groups, as well as details regarding the contexts within which attacks took place. The main problem was that, although the scholars had deep understandings of research methods and statistical capabilities, they did not have adequate data to analyze (Enders, Sandler, & Gaibulloev, 2011). Hence, it is not surprising that the Israeli–Palestinian conflict, in which both sides release detailed information regarding the attacks and their perpetrators (i.e., "official" and "self-report" data), became the main source for analysis and data-driven generalizations (Berrebi & Klor, 2008). The conclusion of the suicide campaign in the Israeli–Palestinian arena in 2004 slowed down these empirical endeavors, while in other areas the phenomenon was spiking. While research teams in Maryland and Chicago were working on GTD and the Suicide Attack Database, respectively, researchers who became accustomed to working with rich information in English, and could not wait for the completion of the work on the datasets, had to rely on subpar data. In most countries, the military or law enforcement agencies collect information on suicide attacks as well as other attacks, for prosecutorial and related purposes rather than for scientific ones. In addition, many countries do not have the capabilities or the will to share such information with the academic community.

The scarcity of data presented significant barriers mostly to "big data" analysts and econometricians. Over the last several decades, these scientists developed remarkable expertise in mining large collections of data on economic, demographic, and other indicators. Such data was provided to them by governments and private entities alike (Mayer-Schönberger & Cukier, 2013). The access to detailed databases that covered the universe of the cases rendered the need for theory almost obsolete. Rather than posing research questions and developing theories, data scientists went directly to the sources and found the answers to their questions. Encouraged by their achievements, econometricians exported their inductive approach to a plethora of social phenomena including suicide attacks (Levitt & Dubner, 2005). The encounter between sophisticated statistical tools and limited

and flawed data on terrorism yielded problematic results. In one of the most widely cited articles on the motivations of individual terrorists, econometricians who aimed at portraying the profile of terrorists, and did not find adequate data, used proxy variables, such as hate crimes, support for violent attacks, and participation in militant activities (Krueger & Malečková, 2003). The study probably contributed to the understanding of perpetrators of hate crimes, supporters of violence, and even insurgents. The challenges of collecting accurate data on individual perpetrators and their social milieu remain formidable (Hegghammer, 2013; Perliger & Pedahzur, 2011). However, the Maryland- and Chicago-based projects on the documentation of violent events made significant advances and now offer data that is both rich and robust. The two teams have engaged in debates revolving around the questions of whether suicide attacks can serve as a proxy for the universe of global political violence incidents, as the Chicago team maintains, and the extent to which the Maryland-based team has managed to overcome the problems that plagued its initial database (Distler et al., 2014; Jensen, LaFree, & Miller, 2014; Pape, Ruby, & Bauer, 2014; Pape, Ruby, Bauer, & Jenkins, 2014). Nonetheless, from a broader perspective, these two projects are not mutually exclusive but rather complementary, and will provide solid foundations for future research on event-based data.

Culture Wars?

Samuel Huntington's (1993) "clash of civilizations" thesis became the starting point for many early studies on suicide attacks and subsequently generated heated debates (Fox, 2001). The primordial–cultural approach that relies predominantly on the study of Holy Scriptures maintains that the mutually exclusive nature of religious beliefs and institutions is the root cause of violent confrontations among them (Barber, 2010). Not surprisingly, these contentions have set off a surge of criticism (Berman, 2005). From an empirical standpoint, this approach seems to tread on shaky ground. Violence with religious attributes often appears as struggles within rather than between communities (Fair et al., 2013). Moreover, the all-encompassing nature of this approach seems problematic in light of the fact that religious justifications for violence have traditionally been marginal in comparison to nationalistic, ethnic, and ideological justifications.

An alternative approach advances the notion that religion is merely a façade that conceals the real causes for violent conflicts, most notably struggles over resources, territory, and political power (Fish, 2011; Mousseau, 2002). Advocates of this approach posit that religion in itself should not be treated as an independent factor that explains violence, but rather as a mediating one. Political leaders infuse their grievances with religious terminology. Religious sentiments can be ideal for mobilizing support, fostering group cohesion, and sanctioning violence (Crenshaw, 2000; Enders & Sandler, 2006; Moghadam, 2003). As we will illustrate in discussions of organizations and motivations, these arguments, too, tread on shaky empirical grounds. Many of the groups that use suicide tactics lack the hierarchical organizational structure on which cultural explanations depend (Pedahzur & Perliger, 2006; Sageman, 2004, 2008a, b); hence, the chain of command to which the argument alludes is often missing (Mousseau, 2002; Moghadam, 2006). In an attempt to reconcile the preceding discrepancies, some researchers interpreted the motivations of suicide attackers by applying their own reasoning, an application that, more likely than not, would remove the cultural, religious, and other contextual factors that may distinguish the terrorists from the researchers. In sum, while culture and religion are essential constructs for the understanding

of self-sacrifice and political violence, the theories drawing on these constructs require further development and refinement (Perliger & Pedahzur, 2014).

Organizations or Networks?

Another significant debate pertains to the structure of the groups that perpetrate suicide attacks (Acosta & Childs, 2013). For decades, scholars used the term "terrorist organization" in reference to most sub-state groups that carried out violent operations against civilians. Nonetheless, a small group of scholars always preferred the term "terrorist group" (Jones & Libicki, 2008; Weinberg, 1991). Referring to "groups" rather than "organizations" gave more flexibility to researchers studying attacks by entities that did not fit the hierarchical model that references to organizations imply. In addition, it became clear that labeling an entity based on a single tactic that it employs—namely, terrorism—is problematic (Moghadam, 2006). Many of the groups that employ terrorism also engage in guerrilla warfare, the provision of public goods to their communities, and even party politics (Acosta, 2014; Martin, 2014; Martin & Perliger, 2012). Terminology became extremely important with the rise of suicide operations and, later, with the emergence of al-Qaeda and other jihadi groups. As regards the scholarship that has followed the modern debut of suicide attacks, some of the most significant theoretical contributions have relied on assumptions of a hierarchical organizational logic (Bloom, 2004; Pape, 2003). Evidence to the contrary, including evidence that the organizational structures of groups perpetrating terrorist attacks are not hierarchical, could potentially undermine the foundations of these theories. Al-Qaeda, which became synonymous with these types of attacks, has presented a significant challenge. The reality of al-Qaeda's organizational structure and functioning, with its global reach in terms of its followers, partners, targets, and objectives, has not fit easily with conjectures associated with hierarchical organizations (Sageman, 2004, 2008b). Attempts of scholars, mainly rational choice theorists, to depict these groups as hierarchical have been undermined by the limited empirical support. These arguments have been further undermined by the wars in Afghanistan and Iraq, which led to the decimation of al-Qaeda Central, and the continuation and actual proliferation of suicide attacks that have followed. Some of the most dramatic terrorist events, including the train bombings in Madrid in 2004 (Hoffman, 2004; Lia & Hegghammer, 2004) and the suicide bombings in London in 2005 (Bulley, 2008), have underscored the decentralized nature of contemporary political violence. The explosion of the Internet and social media and the emergence of the "dark net," have allowed groups, even formerly hierarchical ones, to communicate effectively across large distances and reach sympathetic audiences virtually rather than directly, thus eliminating the risks that are associated with congregating in a central location (Weimann, 2008, 2011).

The increasing numbers of individuals who either traveled to conflict-ridden areas and offered themselves as martyrs (Hashim, 2005) or perpetrated attacks in their respective countries (Silber, Bhatt, & Analysts, 2007) have ignited an important debate (Hoffman, 2008; Hoffman & Reinares, 2014; Sageman, 2008a). The debate has revolved around the command structure and subsequently the objectives of the jihadists that identified with al-Qaeda. In retrospect, it is clear that scholars of both understandings, including those treating terrorist groups as hierarchical and those assuming a more horizontal organizational structure, have made valid points. Indeed, the prolonged campaign against al-Qaeda has "flattened" the organization. At the same time, and true to the Arabic meaning of its

name, "the base," the al-Qaeda movement has become a source of inspiration, with groups and individuals from around the world pledging to fight in its name. Nonetheless, as al-Qaeda in Iraq and its successor, the Islamic State in Iraq and Syria (ISIS), as well as al-Qaeda in the Arabian Peninsula (AQAP) have proven, the paramilitary knowledge and hierarchy of al-Qaeda Central were successfully transferred to its various entities, under the leadership of sometimes-competing al-Qaeda elites. Thus, the picture is even more complicated than researchers had anticipated. Terrorist groups are simultaneously hierarchical and horizontal in their organizations and operations. Moreover, these organizational structures are not static; rather, they change as organizations and political movements evolve and change over time.

Strategic and Political Logics of Suicide Attacks

As we indicated earlier, theories that emphasize the logic underlying terrorist groups' selection of tactics had gained significant prominence in the academic literature. These theories share the assumption that terrorist groups are organized hierarchically and have a centralized leadership. Leaders of such groups have clear strategic goals and engage in perpetual analyses of the costs and presumed effectiveness of the tactics available to them. Basing his analysis on the universe of suicide campaigns from 1981 to 2003, Robert Pape formulated the main strategic logic theory. As a scholar of international relations who adheres to the realist tradition, Pape looked to interactions between sub-state and state actors. Essentially, he maintained that indigenous sub-state actors use suicide campaigns as a strategic weapon with the goal of coercing democratic regimes to withdraw their military forces from occupied lands (Pape, 2003, 2005; Pape et al., 2010). Mia Bloom, a comparative politics scholar, drew attention to another logical dimension—intergroup competition. In the process, she expanded the reach of the strategic logic theory to the domestic political arena. Relying on a narrower geographic scope than Pape, Bloom drew largely on the Palestinian case during the Second Intifada in order to advance an "outbidding theory." This political logic of "outbidding" builds on the depiction of groups using violence, including suicide attacks, as political actors seeking popular support and political power. Bloom's theory refers to the use of suicide attack as a type of political campaign strategy. Actors, regardless of their initial inclination to use suicide attacks, are likely to adopt them based on the popularity of the groups, the popularity of suicide tactics among their presumed constituency, and the degree of support they expect the use of these tactics to yield for those who adopt them (Bloom, 2004, 2005).

The dominance of these two theories in the literature turned them into obvious targets for critics. Much of the critique had to do with their fuzzy definition of suicide terrorism. The first wave of scholarship in the field did not offer a clear distinction between suicide terrorism and suicide operations in other contexts. These studies cannot account for some of the changes that have been observed in the perpetrators and targets of suicide attacks. Suicide attackers have increasingly taken aim at local targets and populations, including Shia civilians in Iraq (Hafez, 2006). It appears that most of the perpetrators are Sunni. Whether or not foreign support for the nascent Iraqi state is understood as a form of "occupation" and how relevant "occupation" is to understanding the increase in suicide attacks remain subjects of debate. Other developments also elicit questions regarding the relevance of "democracies" as ideal, or even typical, targets of suicide attackers; among these are suicide attacks targeting Shia militants in Lebanon, suicide attacks targeting Muslims in

Pakistan, and the identification of weakly democratic or nondemocratic states as the places where most suicide attacks occur.

In addition, scholars of this wave develop their theories by focusing exclusively on suicide operations, which, as we indicated earlier, constitute a small fraction of the overall number of violent attacks, as well as a small fraction of the number of terrorist incidents. In the absence of control groups, the authors limited their ability to identify unique patterns among suicide attackers and attacks (Ashworth, Clinton, Meirowitz, & Ramsay, 2008). The bias toward the realist tradition prevented the exploration of alternative theories such as the diffusion of ideas between organizations and the learning and innovation that may follow (Horowitz, 2010). Indeed, most of the critics aimed at the quantitative aspects of these studies.

Although both scholars were criticized for methodological choices, we believe that the methodological critique was not as significant as the theoretical one. The introduction of the strategic and political logics were instrumental in starting the conversation about the modern use of suicide tactics. It is also important to note that Bloom and Pape were pioneers in the field, and that both theoretical gaps and methodological flaws are expected in such seminal works. Both scholars studied the topic for a long while; both applied mixed-method approaches. It is unrealistic to expect a single individual to be fluent in every language and understand the particular context of each conflict. Moreover, most of the critics did not offer alternative explanations that rose to the sophistication of those that they criticized. The most significant shortcoming of the strategic approach is that it froze despite the dramatic increase in the shifting nature of suicide operations in the years that followed the publication of Pape's work. The goals, characteristics, and targets of suicide attacks and the actors that perpetrate them have become much more diverse since Pape initially introduced his theory. Nonetheless, neither he nor his students amended the theory or accepted the fact that it is not all encompassing as he initially argued (Pape, Feldman, & Chicago Project on Security and Terrorism, 2010). The political logic approach was less ambitious in terms of its theoretical reach. However, the fact that it has not been validated in cases beyond the ones on which it was based leads to the question of whether it makes a theoretical contribution or merely depicts a single case study (Moghadam, 2009).

Individual-level Debates

Attempts to profile and understand the motivations of individual terrorists are at the center of many studies, and scholars of diverse backgrounds engage in attempts to profile "the terrorist" (Hudson, 2002; Krueger, 2008; Reardon, 2015; Russell & Miller, 1977). The scholarship in this field can be divided into three main traditions, based on their respective units of analyses. First, medical and forensic scientists, as well as psychologists and psychiatrists, have been focusing on the individual as an organism. Consistent with earlier criminological approaches (Walters & White, 1989), they have been trying to identify genes, pathologies, and other possible organic factors that could lead an individual to become violent (Post, 1990; Thayer & Hudson, 2010; Victoroff, 2005; Victoroff et al. 2010). This approach appeared briefly among the first studies of suicide attackers (Merari, 1990); however, the growing dominance of political scientists and economists in the field has generated a consensus that suicide attackers are actually normal individuals whose behavior is motivated by external circumstances. Recent studies have cast new doubts regarding the normalcy of suicide attackers (Lankford, 2013, 2014a, b; Merari, 2010; Merari et al., 2010; Post

et al., 2009). Yet, these arguments have yet to be addressed by researchers beyond the confines of this group.

A second and more ubiquitous paradigm places the individual in the context of groups and communities (Shapiro, 2013). Researchers who perceive terrorists as members of goal-oriented, hierarchical organizations tend to pay particular attention to the leadership of such groups and, as discussed earlier, assume rationality on the part of the actors and their organizations, often while drawing on formal modeling approaches (Arce & Siqueira, 2014; Miller, 2013). Academics who approach the topic from a less formal perspective apply ideas from the realms of social psychology (Guess, Tuason, & Teixeira, 2007; Kruglanski et al., 2009) and social networks (Moghadam, 2009; Silke, 2008). The impact of these studies has been profound. We believe that this paradigm is extremely promising and deserves more resources in order to incentivize the development of scholarship in the area.

Meanwhile, the third group has had the largest impact in the field, at least in terms of academic publications and citations. Although it is rooted in psychological and sociological theories identifying the roots of political violence in collective senses of deprivation and frustration (Dollard et al., 1939; Gurr, 1970; Schmid & Jongman, 1988), it is currently dominated by economists. Naturally, scholars from this discipline have reduced the complex arguments regarding relative deprivation to economic inequalities. In retrospect, this line of inquiry contributed only modestly to the understanding of the makeup and motivations of individual terrorists. As we implied in our discussion of the methodological challenges, economists analyze the world through an economic prism. The fact that, in most cases, data on individual terrorists is limited to place of residence, profession, level of education, and employment status allowed economists to bring socioeconomic explanations to the forefront of the research in the field. However, limited variables, unrepresentative samples of so-called terrorists, and the absence of control groups have helped yield conflicting results, which in most cases have not substantiated the hypotheses regarding a linear connection between poverty and political violence. Moreover, these methodological problems do not allow for more nuanced analyses or the testing of alternative hypotheses.

Conclusions

The rapid proliferation of scholarship in the field is asymptomatic to most academic topics. Researchers, mostly in the social sciences and humanities, often face questions regarding the significance of their studies for the "real world." The proliferation of suicide attacks to every corner of the globe in the post-9/11 era provided such scholars with a unique opportunity to make a difference, as well as unprecedented access to funding and opportunities to publish in prestigious academic and popular outlets. The fact that research in the field was lacking encouraged scholars of different disciplines and backgrounds to refocus their research agendas and apply their knowledge and methods to the new field. This could have led to the breakthrough for which scholars of terrorism were waiting (Crenshaw, 2000). As described in this chapter, terrorism is a multifaceted phenomenon that requires a rigorous, interdisciplinary effort. Historians, anthropologists, linguists, religious scholars, and area specialists are vital for the understanding of the context in which different manifestations of suicide attacks emerge and thrive. Social scientists, in general, have the tools to conceptualize different phenomena, delineate their borders, and measure them. Political scientists and sociologists are particularly equipped to identify structures, both hierarchical and nonhierarchical. With the help of game theory, scholars in the field can devise models that

identify organizational and political interests under different circumstances and deduce the likelihood of particular strategic and tactical choices. Criminologists who study crime cartels, criminal networks, and socialization in prisons have unparalleled insights into processes of radicalization and the conditions under which particular actors in such groups turn to violence. Psychiatrists and psychologists have offered important observations regarding individuals who turn to violence and those who lead them in this direction. Finally, over the last several decades, new disciplines that are highly relevant for the study of terrorism have emerged. To name just a few, the emerging science of "big data" provides econometricians, statisticians, and geographers with unprecedented ability to identify trends in terrorism and correlates among variables that may contribute to a clearer understanding of different aspects of the phenomenon. Similarly, computer scientists can use machine learning and simulations to identify patterns and assist policymakers and law enforcement agencies in allocating resources based on probable future trends.

Notes

1   We will use the terms "suicide attacks" and "suicide operations" interchangeably.
2   This figure is based on Global Terrorism Database (GTD) global events. In order to demonstrate the importance of a clear definition, we applied in our analysis the following rules that GTD offers. First, all acts were aimed at attaining a political, economic, religious, or social goal. Second, there must be evidence of an intention to coerce, intimidate, or convey some other message to a larger audience (or audiences) than the immediate victims. Third, the action was outside the context of legitimate warfare activities (particularly the admonition against deliberately targeting civilians or non-combatants).

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Terrorist Assassinations: A Criminological Perspective

Marissa Mandala

Introduction

On the morning of March 16, 1978, former Italian prime minister Aldo Moro was kidnapped by the Red Brigades terrorist organization. After abducting Moro, a spokesman for the organization declared Moro to be "Only our first victim. We shall hit at the heart of the state" (BBC). When the Italian government failed to meet their demands for the release of 13 prisoners, the group assassinated Moro on May 9, leaving his body in an abandoned car in the heart of Rome (Moss, 1981). Moro's murder was representative of the growing political violence perpetrated by several Italian terrorist groups during the early 1970s. The event demonstrates that terrorists use the assassination tactic to inflict symbolic and physical harm to achieve their objectives. As the leader of Italy's Christian Democratic Party, Moro was a symbolic target whose death had a considerable impact on the Italian government (Gumbel, 1998).

The serious ramifications that an assassination can have is exemplified by the 1993 murder of Melchior Ndadye, the president of Burundi, whose death sparked a civil war that lasted 13 years and resulted in at least 200,000 deaths (Appleton, 2000; Bundervoet, 2009). Assassinations not only can cause internal conflict within a country, but can also contribute to international turbulence and wars. Historians have attributed the start of World War I to the 1914 assassination of the Archduke Franz Ferdinand, committed by the Black Hand (a Serbian nationalist group) (Levinson, 2005). Assassinations can also have psychological effects on citizens (Freedman, 1984; Varma, Chandiramani, Rao, Bhave, & Kaur, 1989; Maldonado et al., 2002). Countries can even experience cultural trauma as a result of an assassination (Debs, 2013; Türkmen-Dervişoğlu, 2013).

Assassination is defined by the National Counterterrorism Center as the:

> Targeted killing of a country's public officials or individuals who represent the political, economic, military, security, social, religious, media, or cultural establishments. The killings can be motivated by ideology, religion, politics, or nationalism.

The Global Terrorism Database (GTD) Codebook (2014, p. 22) provides a similar definition, stating that an assassination is:

> An act whose primary objective is to kill one or more specific, prominent individuals. Usually carried out on persons of some note, such as high-ranking military officers, government officials, celebrities, etc. Not to include attacks on non-specific members of a targeted group.

These definitions highlight that the assassination tactic differs from other types of terrorist attacks because it targets specific individuals. Other types of terrorist attacks target locations, structures, or general groups or categories of people.

Most, if not all, of the assassination literature originates from outside criminology, from the fields of political science, history, and psychology (Ben-Yehuda, 1990). In light of this void, criminology theories can offer informative frameworks for examining the terrorist tactic of assassination. In particular, the crime opportunity theories belonging to the environmental criminology approach, which include routine activities, crime pattern, and rational choice, have been successfully applied to the study of terrorism. For example, Rossmo and Harries (2011) applied environmental criminology to study the geospatial patterns of terrorist cells, and Perry and Hasisi (2015) examined jihadist suicide terrorism using rational choice theory. These frameworks are therefore likely to be equally insightful to the study of assassinations. Given the emphasis on crime specificity inherent in crime opportunity theories, it is appropriate to apply these theories to assassinations, a very specific form of terrorism. In addition, other criminology theories such as social disorganization, social learning, and strain have provided useful perspectives for terrorism studies, and can therefore also be applied to the study of assassinations.

This chapter will illustrate how criminology theories can benefit and contribute to the study of assassination as a terrorist tactic. This chapter begins with an overview of the history of assassination and the link between this tactic and terrorism. A review of the assassination literature is then provided, followed by a discussion of the criminology literature that has been applied in terrorism studies and how these theories are similarly applicable to assassination studies. Next, the GTD is discussed as an appropriate dataset to study assassinations, and descriptive results are reviewed. This chapter concludes with recommendations for how future research can explore terrorist assassinations through a criminology perspective.

History of Assassination

The link between terrorism and assassination can be seen in the origins of the word "assassin," which comes from a radical Shi'a Muslim terrorist group that fought the Christian Crusaders between 1090 and 1272 and used the tactic of assassination to achieve their political objectives (Leiden, 1969; Hoffman, 1995). The group also attacked Islamic Sunni leaders in an effort to disrupt their influence in Islam (Lewis, 2008). A central figure in this terrorist group was Hassan-I Sabbah, who exploited the psychological impact of terror by always having his assassins attack with daggers in intimate and violent clashes (Bogosian, 2015). The word "assassin" stems from an Arabic word meaning "hashish," which refers to the tradition of assassins taking hashish right before they attacked (Leiden, 1969; Hoffman, 1995). Assassins were motivated by the belief that assassination was a "divine duty," and that they would go directly to heaven if they were killed while carrying out an attack

(Hoffman, 1995). The idea of the suicide martyr that exists in some radical Islamic terrorist organizations today can therefore be traced back to these original assassins (Hoffman, 1995).

Similar to how ideological and political motivations are tied to the actions of terrorist organizations, assassinations have also often been driven by political factors. For example, political motivations were behind the murder of Julius Caesar, as well as the assassinations of Japanese prime ministers Hamaguchi and Inukai in the years prior to World War II (Crotty, 1998). When a young prince came to power during the Ottoman Empire, all of his brothers and male cousins were traditionally killed to prevent them from posing any threat to the throne in the future (Bogosian, 2015). Assassination as an avenue for political resistance has also been used in the form of tyrannicide (the assassination of a tyrant). Examples include the various attempts to murder Hitler during World War II (Hauner, 2007). Assassination as a tool for change has often been an integral part of revolutions. For example, the tactic was used to kill Tsar Alexander II in Russia in 1881 and in the political targeted killings of over 300 specified individuals in Germany following World War I (Bogosian, 2015).

Organized groups have regularly used assassination to inflict terror and weaken the government, and examples include attacks committed during the French Revolution, the Russian purges of the 1930s, and the actions of the Viet Cong in South Vietnam (Crotty, 1998). However, the systematic use of assassination by organized groups seeking to further some political objective mainly characterized the nineteenth century (Gross, 1969). During this period, terror was frequently directed at prominent political leaders who were considered oppressors (Gross, 1969). Another important characteristic of this time period was the technological change and progress occurring throughout the world. The Industrial Revolution aided the development of new and powerful weapons, such as the handgun and enhanced explosives, which assassins used to commit more deadly attacks (Bogosian, 2015).

While the history of assassination illustrates how embedded the tactic is with terrorism, scholars maintain that important differences exist between the two. Ben-Yehuda (1990) argues that terrorism and assassinations are distinguishable by their different target types. The author contends that this difference has yet to be fully explored by researchers. Given the distinction between the targets of assassinations and those of other terrorist attacks, it seems important to empirically investigate if in fact the underlying mechanisms of assassinations differ from other terrorist tactics.

Review of the Assassination Literature

The assassination literature mainly stems from the fields of psychology, history, and political science. Criminologists have rarely focused on assassinations. Political scientists have examined both the characteristics surrounding specific assassinations and the political consequences of attacks. For example, one study identified certain political conditions that contribute to assassination attempts on US presidents (Nice, 1994). This study contends that the likelihood of an assassination is facilitated by the advent of the modern presidency as a symbol of importance and power along with its increased visibility to the public (Nice, 1994). Periods of partisan realignments along with war are also associated with presidential assassination attempts. Other researchers discuss how assassinations can have serious political ramifications for attacked countries (Crotty, 1998).

The assassination of a government figure can disrupt democracy (Vossekuil, Borum, Fein, & Reddy, 2001), and thus create the impression that the attacked country is politically unstable (Hurwitz, 1973). Former Italian prime minister Aldo Moro's assassination provides

an example of the important political consequences that an assassination can have. Moro's murder ended the "historic compromise" in Italy, a controversial agreement that would have created a coalition between the Christian Democrats and the Italian Communist Party (Gumbel, 1998). Yitzhak (2010) similarly discusses how the assassination of Jordan's King Abdullah I in 1951 threatened the stability of the country, as its leaders felt threatened by the Palestinians as well as other Arab nations.

In addition to political consequences, assassinations can also produce important psychological effects on a nation's citizenry. Shocking and unexpected assassinations have created panic within the attacked country. Debs (2013) contends, for example, that Mahatma Gandhi's assassination in 1948 produced cultural trauma in India. Similarly, Türkmen-Dervişoğlu (2013) analyzes the cultural trauma provoked in Turkey following the 2007 assassination of the well-known Turkish–Armenian journalist Hrant Dink. Childers (2013) offers the same interpretation of US President McKinley's assassination in 1901.

Many researchers note that the assassination of President Kennedy had a strong psychological impact on American citizens (Ebel-Lam, Fabrigar, MacDonald, & Jones, 2010). Freedman (1984) finds that many Americans equated the assassination of President Kennedy with their own father being murdered. In fact, many Americans were actually more depressed following the president's murder than when their own father died (Freedman, 1984). The 1994 assassination of Mexican presidential candidate Luis Donaldo Colosio caused acute stress reactions among citizens (Maldonado et al., 2002). Indeed, individuals do not need to be physically present to (vicariously) experience an assassination's psychological effects (e.g., they can watch the attack on television).

Much of the literature focuses on the individual offenders (i.e., assassins) of assassinations. Interestingly, most assassins responsible for the targeting of US government officials have been mentally ill (Meloy et al., 2004). For example, Hinkley's (who attacked President Reagan) mentally unstable nature and social isolation is commonly highlighted (Goldstein, 1981; Rosenzweig, 1981). President Clinton's attempted assassin also suffered from emotional and mental deficits (Clarke & Lucente, 2003). This lack of political motivation that characterizes US presidential assassins distinguishes the United States from other developed countries, where assassins instead tend to be politically driven (Heyman, 1984; Crotty, 1998; Clarke & Lucente, 2003). Clarke and Lucente (2003) discuss the typology used by the US Secret Service for classifying presidential assassins. In this typology, only one out of the four categories (Type I) accounts for political extremist motivations, while the remaining three categories (Type II, III, and IV) account for varying degrees of emotional and mental disorders. Clarke and Lucente (2003) further note that some assassins can be both mentally unstable and driven by some political motivation. Despite the fact that pathological motivations behind US political assassins are common, emotionally disturbed individuals have also carried out or attempted to carry out assassinations in other countries. For example, the assassin responsible for murdering Swedish minister of foreign affairs Anna Lindh in 2003 had a history of psychological disorders (Unsgaard & Meloy, 2011).

As noted, criminology perspectives have rarely been applied to the study of the assassination tactic. The current literature also lacks a focus on the assassination event itself, instead concentrating on the political conditions surrounding the attack or resulting from the attack. The literature also concentrates on the psychological impact that attacks can have on citizens, along with the mental and emotional characteristics of individual assassins. Research has yet to examine the environmental conditions and opportunities that facilitate successful assassinations. To fill this gap, an application of the criminology opportunity theories (i.e., rational choice, routine activities, and crime pattern) that

emphasize the crime event, rather than the individual offender, seems appropriate. In addition, other criminology theories such as social disorganization, social learning, and strain theories can inform assassination studies and help explain how assassins become involved in attacks. Such theories can also help determine what societal conditions facilitate assassinations.

Criminology Theories and Terrorism: Implications for Assassinations

Criminology and Terrorism

Although I was unable to identify any prior criminology studies analyzing assassinations, there has been a growing body of research applying criminological perspectives to terrorism. LaFree and Hendrickson (2007) explain that, although criminologists have been slow to study terrorism, a criminology approach can greatly benefit the fight against terrorism by assisting our understanding of terrorist behavior and the practices for processing terrorists (see also Hamm, 2007). The authors highlight the utility of criminology by noting that crime and terrorism are often connected, since many terrorists must engage in preparatory crimes to further their objectives. The promising results from studies that have applied theories of criminology to terrorism indicate that such theories can be extended to assassination research.

Crime Opportunity Theories

Criminologists have found the environmental criminology perspective to be informative when studying terrorism. This perspective argues that, to prevent crime, it is necessary to examine the interaction between the offender and the environment (Wortley & Mazerolle, 2013). Environmental criminology consists of three main theories that are also known as crime opportunity theories: routine activities, rational choice, and crime pattern. Rational choice stresses the importance of crime specificity in examining how offenders make decisions (Clarke & Cornish, 1985; Cornish & Clarke, 1987). Crime pattern theory focuses on the location of criminal opportunities and maintains that crime is non-random, and that crime opportunities occur when the offender's environment intersects with the victim's environment (Brantingham & Brantingham, 1981, 1993). Routine activities theory claims that crime occurs when there is a convergence in time and space of three elements: (1) a likely offender, (2) a suitable target, and the (3) absence of a capable guardian (Cohen & Felson, 1979; Felson & Cohen, 1980; Felson, 2013). The situational crime prevention approach is derived from these three theories. Situational crime prevention aims to change the situational elements surrounding a crime to prevent it (Clarke, 2013). An important aspect of situational crime prevention is the need for the approach to focus on a specific type of crime instead of broad categories of crime (Clarke, 1995, 2013).

Several researchers have applied crime opportunity theories and situational crime prevention to terrorism studies (see Freilich & Newman, 2009). Clarke and Newman (2006) utilize this approach when they identify the attributes of weapon selection in their acronym known as MURDEROUS. They argue that terrorists choose weapons that are Multipurpose, Undetectable, Removable, Destructive, Enjoyable, Reliable, Obtainable, Uncomplicated,

and Safe. Clarke and Newman (2006) also developed the acronym EVIL DONE to identify targets that are attractive to terrorists. They note that the elements of susceptible targets include those that are: Exposed, Vital, Iconic, Legitimate, Destructible, Occupied, Near, and Easy. The authors demonstrate that EVIL DONE can be applied to assassination attacks to identify vulnerable targets. Yun (2009) applies situational crime prevention to the terrorist kidnapping of hostages in Afghanistan. Meyer (2012) incorporates ideas from rational choice theory and situational crime prevention to provide advice on how to prioritize protective measures against explosive attacks on railways, finding that the best protective measures focus on limiting the damage of such attacks, rather than on preventing them. Fahey et al. (2012) look at whether or not situational factors can distinguish terrorist airplane hijackings from non-terrorist airplane hijackings. They find that several situational factors, such as those measuring organizational resources, can distinguish terrorist from non-terrorist hijackings.

Perry and Hasisi (2015) apply a rational choice framework to examine the motivation behind jihadist suicide terrorism, concluding that suicide terrorists do not have different motivations from those of other criminals. They note that both criminals and suicide terrorists are concerned with self-gratifying behavior that benefits them in some way. Rossmo and Harries (2011) utilize environmental criminology in their study of the geospatial patterns of terrorist cells in Turkey. They find support for the importance of geography, noting that terrorists behave rationally by choosing locations for their cells within an appropriate and feasible distance from their targets.

In their analysis of ideological and non-ideological homicides committed by Far Right extremists in the United States, Parkin and Freilich (2015) find support for their hypotheses based on routine activities theory. For example, they find that victims of non-ideological homicides are more likely to know their offender, which supports a key notion in routine activities theory where victims and offenders interact with each other when their everyday activities overlap. An additional finding supporting this framework is that victims of ideological homicides are more likely to be killed outside during their daily routine activities, while victims of non-ideological homicides are murdered inside and at home. In another study on terrorist victimizations, Canetti-Nisim, Mesch, and Pedahzur's (2006) results have implications for the routine activities approach. Unlike what is commonly believed about the victims of terrorism being randomly targeted, the authors find evidence that certain types of terrorist attacks are associated with certain groups of people, and peoples' lifestyles can make them more vulnerable to attacks.

An important aspect of situational crime prevention and crime opportunity is the notion that there are a series of steps involved in the commission of a crime (Cornish, 1994). Cornish (1994) referred to the processes involved in each stage of crime commission as "crime scripts." Crime scripts attempt to explain the unfolding of criminal events and how offenders make decisions at various steps of the process. By understanding how the crime event unfolds, prevention efforts can be directed at various steps in the process to make the commission of the crime more difficult (Clarke, 2013). Several terrorism studies have used crime scripts to identify opportunities and techniques for preventing attacks. Freilich and Chermak (2009) developed crime scripts for law enforcement killings committed by US Far Right extremists. Meyer (2012) created crime scripts to identify measures for reducing the harm caused by terrorists committing explosive attacks on railways, and Yun (2009) used scripts to study kidnappings in Afghanistan. Clarke and Newman (2006) similarly outlined the steps involved for suicide bombers to commit an attack and identified points for intervention.

Given the support for the applicability of crime scripts to different types of terrorist attacks, it appears that the creation of crime scripts for assassinations is appropriate. Crime scripts can assist in identifying and disrupting opportunities for assassinations. Scripts could also be created for different types of assassinations, such as those involving public officials versus private individuals, particular weapon types, or specific terrorist groups. In sum, crime opportunity theories and situational crime prevention can serve as appropriate frameworks for studies that seek to determine how to best disrupt or prevent assassinations from occurring. The studies mentioned earlier show how these criminology approaches have been successfully integrated in studies that examine specific terrorist tactics, such as suicide bombings (Perry & Hasisi, 2015), kidnappings (Yun, 2009), explosive attacks (Meyer, 2012), and airplane hijackings (Fahey et al., 2012). Given that crime opportunity theories have been utilized in studies that examine these different terrorist tactics, as well as the fact that situational crime prevention emphasizes the importance of crime specificity, the examination of the terrorist tactic of assassination can contribute to and expand upon this research.

Differential Association/Social Learning Theory

Differential association and social learning theory are also relevant to the study of terrorism (Hamm, 2007). Differential association theory posits that individuals learn patterns of criminal behavior, as well as techniques of criminal behavior and motivations, when they interact with one another socially (Sutherland, 1973). Burgess and Akers (1966) reformulated differential association theory into social learning theory by integrating concepts from modern learning theory to explain how individuals learn criminal behavior.

Terrorist groups learn the necessary techniques and skills and transmit these skills to their group members (Crenshaw, 2008; Akers & Silverman, 2004). Freiburger and Crane (2008) discuss the role of the Internet and how it has aided terrorists to recruit members to join their cause. They find that the Internet assists in the transmission of knowledge pertaining to the skills and techniques necessary to becoming a terrorist. Armstrong and Matusitz (2013) utilize a differential association framework and examine how violence is promoted in interactions between Hezbollah terrorist members. The authors conclude that the theory explains how the organization recruits new members and persuades them to engage in attacks. Specifically, the authors note that Hezbollah members develop the necessary skills and learn violence by interacting and communicating with each other (Armstrong & Matusitz, 2013). Hamm and Van de Voorde (2005) incorporate both the routine activities perspective and social learning theory in their study of terrorist involvement in transnational crime. Their results indicate support for both theories, in that the failure of terrorists to engage in crime can result from law enforcement efforts to (1) interrupt the development of criminal skills, and/or (2) remove criminal opportunities (Hamm & Van de Voorde, 2005).

These studies illustrate the applicability of differential association/social learning theory to the study of terrorism. Since research confirms the important role that learning plays in how terrorists transfer knowledge and skills to one another, this approach can prove informative and beneficial to the study of assassinations. This perspective can help determine how terrorists learn to carry out successful assassinations, how they train one another for attacks, as well as how they learn to use their weapons. This framework can also prove instructive in discovering how terrorists decide to use particular weapons over others when carrying out an assassination.

Social Disorganization Theory

Despite the general lack of research applying social disorganization to terrorism, there have been some studies that have applied the theory with promising results. Social disorganization theory focuses on ecological conditions, often on the neighborhood level, related to crime, with high-crime areas being where informal and social controls are ineffective. Key to this perspective is the notion that crime is physically distributed in certain areas, such as those characterized by low socio-economic status and ethnic heterogeneity (Shaw & McKay, 1942).

In their analysis of data from the US Extremist Crime Database (ECDB), Freilich, Adamczyk, Chermak, Boyd, and Parkin (2015) apply social disorganization in their study of ideological violence and "regular" non-ideological homicides. LaFree and Bersani (2014) find that social disorganization explains a large portion of terrorist attacks in the United States, with attacks being more common in areas with greater language diversity, foreign-born residents, residential instability, and urban residents. They conclude that most of the social disorganization variables were associated with more terrorist attacks as well as fatalities. Fahey and LaFree (2015) test social disorganization in the form of state instability as represented by internal conflict/war, regime change, and genocide. They find that social disorganization explains increases in both terror attacks and fatalities. These studies suggest that social disorganization theory is a valuable approach for studying terrorism.

Social disorganization theory can prove helpful in uncovering the conditions that facilitate assassination attacks within countries. In addition, the framework may prove that different terrorist tactics (such as assassinations) are associated with different social disorganization variables. Thus, perhaps, the variable regarding the number of foreign-born residents is associated with more suicide bombings but not with more assassinations.

Strain Theory

Scholars contend that strain theory holds promise for terrorism studies even though it has rarely been applied (Chermak & Gruenewald, 2015). Strain theory asserts that individuals turn to crime when they experience a disjunction between their aspirations and actual achievements (Agnew, 1992; Agnew, Chapter 7 in this volume). This gap between aspirations and achievements leads individuals to experience negative emotions, which then leads to crime (Agnew, 1992). Agnew (2010) recognized the usefulness of strain theory for terrorism research, and thus reformulated the theory into a general strain theory for terrorism. This general strain theory of terrorism posits that terrorism is likely to occur when collective strains are high in magnitude with civilian victims, are unjust, and are caused by more powerful others (Agnew, 2010).

Despite the lack of terrorism studies where a strain theory framework is utilized, a few works have used the perspective. Pisiou (2015) incorporates strain theory in her examination of jihadi and right-wing radicalization. In his study of emotions and terrorism, Rice (2009) concludes that research will benefit from examining the impact of strain on terrorism. González, Freilich, and Chermak (2014) incorporate strain theory in their framework to help explain how females become involved in terrorist activity. Chermak and Gruenewald (2015) examine the characteristics of violent extremists in the United States. Their results have interesting implications for strain theory, since they find that extremists who commit violent crimes experience the strain of aspiring to the goals of society but not having the means required to obtain them.

Strain theory appears to have promising potential for future terrorism and assassination studies. It could help provide interesting explanations for the motivations driving some terrorists to become assassins. An application of strain theory may also reveal insightful differences between terrorist involvement in different types of terrorist tactics. For example, perhaps the terrorists who engage in assassination incidents experience different strains compared with those who engage in other tactics such as hijackings or suicide bombings.

Given the relationship between terrorism and assassinations discussed previously, along with the criminology literature that has examined various types of terrorist tactics, it is surprising how criminology has yet to specifically explore the tactic of assassination. All the criminology theories discussed earlier appear to hold promise not just to the study of terrorism, but also for the study of terrorist assassinations. While some theories have been applied more often than others in terrorism research, they all have potential for providing insight into the underlying conditions surrounding terrorist assassinations, as well as how such incidents can be disrupted and prevented.

Assassination Data

The reason why criminologists do not pay attention to the tactic of assassination is likely attributable to the same challenges that researchers have faced in studying terrorism. One of the main challenges confronting terrorism research is the difficulty in obtaining terrorism data (Freilich & LaFree, 2015). Scholars have noted the impracticality of gaining data through interviewing terrorism suspects and victims, especially given the rarity of such events (Freilich & LaFree, 2015). Considering the fact that assassinations are less common than other types of terrorist attacks, these same data challenges are magnified for criminologists seeking to study assassinations.

Despite these data challenges, the GTD is one source where researchers can analyze assassination events. The GTD is an extensive dataset that contains information about every known terrorist attack (domestic and international) that has occurred worldwide since 1970 (LaFree & Dugan, 2007; LaFree, Dugan, & Miller, 2015). The GTD codes for the type of terrorist attack conducted, including roughly 17,000 assassinations. Data for the GTD are obtained from open-source media outlets, and the dataset contains close to 120 variables, with information regarding the location of an attack, the weapons used in an attack, the target types, the name of the terrorist group responsible, and the total number of fatalities and injuries resulting from an attack (LaFree & Dugan, 2007). Given the number of different variables and assassination events included in the GTD, the dataset appears promising for assassination research. However, the dataset does contain some limitations. Since the data are obtained from media sources, they are likely biased toward those incidents of terrorism that are most newsworthy. Moreover, attacks that occur in parts of the world with less media attention are less likely to be included in the GTD (LaFree & Dugan, 2007).

Descriptive results from the GTD assassination data are revealing.

Figure 23.1 shows how most assassinations occurred during the 1980s and 1990s. A large spike occurred between 2010 and 2014, which mirrors the trend involving non-assassination terrorism. The period of 2010–2014 accounts for roughly 18% of all assassinations since 1970, with a total of almost 3,000 attacks. Given this spike in assassinations that has occurred over the past few years, it seems particularly relevant to study the tactic today.
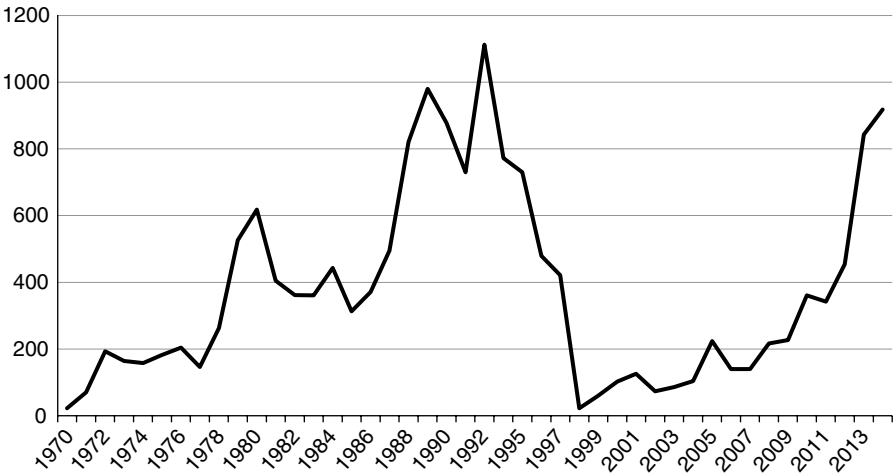
Figure 23.1 Total Assassinations Worldwide, 1970–2014
Note: A total of 16,658 assassinations occurred between 1970 and 2014.

Table 23.1 Top 30 Countries with the Most Terrorist Assassinations, 1970–2014

#	Country	Total	#	Country	Total
1	United Kingdom	1,644	16	Lebanon	337
2	Colombia	1,321	17	West Bank and Gaza Strip	325
3	Pakistan	1,105	18	Yemen	268
4	Iraq	1,092	19	Russia	239
5	India	1,071	20	Somalia	235
6	Peru	995	21	Egypt	210
7	Philippines	737	22	Italy	205
8	Spain	601	23	Israel	186
9	Afghanistan	534	24	France	162
10	Guatemala	510	25	Libya	142
11	El Salvador	449	26	Thailand	140
12	South Africa	441	27	Argentina	132
13	Sri Lanka	435	28	United States	129
14	Algeria	430	29	Iran	126
15	Turkey	398	30	Nigeria	122

Note: These top 30 countries account for 88% (14,721) of all terrorist assassinations that occurred during the time period.

Table 23.1 displays the top 30 countries that experienced the most assassinations between 1970 and 2014. These 30 countries account for almost 90% of all attacks, with the United Kingdom, Colombia, Pakistan, Iraq, and India experiencing the most, with over 1,000 assassinations occurring in each country.

Table 23.2 displays the different targets of assassination attacks. The most frequent targets include general government targets, which account for almost 30% of all attacks, followed by private citizens and property (at 23%), police (15%), military (8%), and businesses (6%). These results indicate that the threat of assassination exists for both government- and non-government-affiliated individuals.

Table 23.2   Assassination Target Types, 1970–2014

Target	Number of Attacks	Percentage
Government (general)	4,866	29%
Private citizens and property	3,770	23%
Police	2,555	15%
Military	1,413	8%
Businesses	947	6%
Terrorists/non-state militia	572	3%
Journalists and media	559	3%
Violent political parties	458	3%
Religious figures/institutions	402	2%
Educational institutions	353	2%
Government (diplomatic)	335	2%
Total	**16,230**	**97%**

Note: These top targets account for 97% (16,230) of all terrorist assassinations that occurred during the time period.

Table 23.3   Assassination Weapon Types, 1970–2014

Weapon	Number of Attacks	Percentage
Firearms	11,966	72%
Explosives	2,418	15%
Unknown	1,416	9%
Other	858	5%
Total	**16,658**	**100%**

Table 23.3 shows that firearms are by far the most popular weapons used in attacks, accounting for roughly 72% of all assassinations, while explosives are the second-most popular, accounting for 15% of all attacks. This contrasts to the weapons used in other types of terrorist attacks, where 56% were carried out using explosives and almost 32% with firearms. The table also shows that close to 10% of attacks were carried out using unknown weapons. This high number of unknowns reflects one of the weaknesses of open-source data (see LaFree, Dugan, & Miller, 2015 for more detail on unknowns).

Table 23.4 shows that 25 terrorist groups account for 30% of all assassinations perpetrated during the time period. Unknown terrorist groups committed almost half of all attacks. Perhaps this high number of unknowns is a result of groups not claiming responsibility for attacks, splinter groups that are less organized, or lone-wolf attackers who are not formally affiliated with any terrorist organization. In addition, a number of cases appear to be unclear with regard to which group carried out certain attacks. LaFree, Dugan, and Miller (2015) refer to these groups as "generics." For example, some groups were coded simply as "extremists," such as "Sikh Extremists," "Irish Republican Extremists," and "Protestant Extremists." Thus, it is unclear what exact branch of terrorist group the cases that make up those categories belong to. Other terrorist group entries are similarly unclear and inherently general, such as the groups coded simply as "Gunmen," "Palestinians," or "Narco-Terrorists." These kinds of coding ambiguities, along with the number of unknowns, reflect some of the limitations involved with open-source-media-generated data.

Table 23.4 Top 25 Terrorist Groups Responsible for Assassinations, 1970–2014

Group Name	Number of Attacks	Percentage
Irish Republican Army (IRA)	860	5.2%
Shining Path (SL)	832	5%
Basque Fatherland and Freedom (ETA)	473	2.8%
New People's Army (NPA)	348	2.1%
Taliban	298	1.8%
Death Squad	257	1.5%
Revolutionary Armed Forces of Colombia (FARC)	192	1.2%
Ulster Freedom Fighters (UFF)	157	0.9%
Ulster Volunteer Force (UVF)	157	0.9%
People's Liberation Front (JVP)	131	0.8%
Liberation Tigers of Tamil Eelam (LTTE)	130	0.8%
Farabundo Marti National Liberation Front (FMLN)	128	0.8%
Al-Gama'at al-Islamiyya (IG)	125	0.8%
Al-Qaeda in the Arabian Peninsula (AQAP)	117	0.7%
Al-Shabaab	115	0.7%
Kurdistan Workers' Party (PKK)	107	0.6%
National Liberation Army of Colombia (ELN)	89	0.5%
Tehrik-i-Taliban Pakistan (TTP)	72	0.4%
African National Congress (South Africa)	70	0.4%
Irish National Liberation Army (INLA)	70	0.4%
Islamic Salvation Front (FIS)	70	0.4%
Red Brigades	60	0.4%
First of October Antifascist Resistance Group (GRAPO)	52	0.3%
Armed Islamic Group (GIA)	49	0.3%
Boko Haram	47	0.3%
Total	**5,006**	**30%**

Note: These top terrorist groups are responsible for 30% (5,006) of all terrorist assassinations that occurred during the time period. Unknown and generic groups account for 54% (8,961) of attacks.

Table 23.5 Successful vs Unsuccessful Assassinations, 1970–2014

Successful	Number of Attacks	Percentage
No	3,589	22%
Yes	13,069	78%
Total	**16,658**	**100**

Table 23.5 illustrates that the vast majority (78%) of assassinations were successful in killing the intended target, compared with 22% that were unsuccessful. The GTD Codebook (2014) states that an assassination is considered successful only if the intended target is killed. If the assassination resulted in any other individuals or bystanders being killed but not the target, it is coded as an unsuccessful attack. Given the number of variables available in the GTD, the dataset offers a valuable resource to examine the characteristics that differentiate these successful and unsuccessful attacks.

Although the GTD has important limitations, it offers a promising starting point for researchers to examine assassinations. Since the GTD lacks more detailed information regarding assassination events, there is an opportunity for researchers to expand upon the

dataset by going back to the open-source material and adding variables to fit the criminological theory they seek to test. For example, social disorganization variables such as ethnic heterogeneity and socio-economic status can be added, along with situational crime prevention variables, such as factors that indicate the environment of the assassination attack (i.e., did the attack occur inside vs. outside, did the target have a bodyguard or security detail, etc.). In addition, variables measuring strain and learning can also be added after reviewing information on the assassins provided in the media reports.

Future Research

The preceding discussion serves to illustrate how future research can incorporate criminology theories to study assassination as a terrorist tactic. Given the widespread application of crime opportunity theories and situational crime prevention in terrorism research, future studies can apply similar frameworks to uncover opportunities for disrupting and preventing terrorist assassinations from occurring. The GTD, with roughly 120 variables, offers one avenue where researchers can untangle the situational factors involved in assassinations. In addition, researchers can expand upon the GTD by analyzing open-source information pertaining to particular assassination events and developing additional situational variables. Since assassinations represent a specific form of terrorism, the use of this theoretical framework seems particularly relevant, considering the emphasis it places on crime specificity. Future research exploring the tactic will not only contribute to the assassination and criminological literature but will also assist practitioners in the formulation of specific measures directed at the prevention of assassinations.

The differential association/social learning perspective can also benefit assassination research. Scholars can apply this perspective by identifying and coding for relevant learning variables present in each assassination case. For example, do any news articles point out that the involved assassin learned how to build or use his or her weapon on the Internet? Researchers can also explore the role that social media platforms such as Facebook and Twitter play in facilitating the learning behavior of assassins. This approach can allow researchers to analyze how terrorists learn to implement successful assassinations, how they prepare for attacks, as well as how they obtain and learn to use weapons. Since the GTD codes for successful assassinations, researchers can compare the attributes of successful and unsuccessful attacks to determine the role that learning plays in attacks.

Social disorganization theory and strain theory are two other criminology theories that future research on assassinations can benefit by using. Social disorganization theory can assist in revealing the underlying social conditions that are associated with assassinations. To test this theory, researchers can analyze assassinations in conjunction with variables such as ethnic heterogeneity, residential instability, and socio-economic status. Future studies can also explore how these conditions associated with assassinations are either different from or similar to the conditions correlated with other terrorist tactics, such as hijackings or kidnappings. Results may reveal that different tactics stem from different underlying conditions. Strain theory can help researchers determine the factors that motivate some terrorists to become assassins. Future research can also examine whether different terrorist tactics involve different types of strain. For example, perhaps some individuals become assassins because the idea of murdering a very prominent and symbolic individual is particularly appealing to them (i.e., gaining notoriety), while perhaps individuals who partake in other types of terrorist attacks, such as suicide bombings, are motivated by different rewards (e.g., religion).

Conclusion

In conclusion, the application of criminological perspectives to the study of terrorist assassinations can contribute to both terrorism and criminology literature, as well as assist policymakers and practitioners in fighting terrorism. Although criminological perspectives have been applied to different types of terrorist attacks, including kidnappings, suicide bombings, and hijackings, this study could identify no prior research in criminology that has examined assassinations. Given the unique impact that a successful assassination event can have, not only on a country but also on the world, it appears particularly important for criminologists to begin studying assassinations. A criminological perspective will provide insight and help researchers and practitioners obtain a more comprehensive understanding of the terrorist tactic of assassination.

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Part VI

Terrorism and Other Types of Crime

Organized Crime and Terrorism

Enrique Desmond Arias and Nazia Hussain

The connections between organized crime and terrorism pose theoretical and empirical challenges to researchers. Many scholars working in this area have described these links as a nexus or center where these two sets of practices make contact. Existing writing has done an excellent job pulling apart the different dynamics of these contacts. More importantly, this literature has also made clear the complex cycles through which criminal groups can become terrorist organizations, and through which terrorist groups can become criminal. This dominant approach, however, generates a good deal of analytic imprecision, since crime and terrorism are not discrete concepts and, perhaps more importantly, governments often have an incentive to conceptually merge the two activities to justify hardline anti-terrorism and anti-crime policies. Much of the existing literature paints an incomplete picture by divorcing crime–terror linkages from the broader context of state power and regime opposition. Thus, while crime–terror intersections provide an important picture of complex and dynamic security threats, solely focusing on the tactics, alliances, and conditions that support them offers too narrow a picture that merely reifies narratives of pecuniary illegal activity, the nature of anti-regime violence, and the contacts between the two.

This chapter will argue that connections between crime and terror should be looked at in a wider context that includes non-terrorist insurgents as well as state actors that, under different circumstances, engage in or build contacts with economically oriented criminals, insurgents, and groups engaged in terrorist violence. Building on existing writing, we will show that understanding the relationship between criminal activity and terrorism involves unpacking the concepts underlying this relationship to develop a more nuanced understanding of these phenomena. Escaping the crime–terror nexus for more analytically discrete terrain involves reflecting critically on the types of organizations that become involved in both criminal and terrorist activities; why they build these connections with one another, and to other types of organizations; and the connection of their activities to legitimate actors in state and society, and to regime opponents not engaged in terrorist violence.

Current Approaches to Understanding Crime and Terrorism

The scholarly debate about crime–terror interactions has its origins in the 1990s when the end of the Cold War imposed new fund-raising challenges on many regime opponents (Carrapicoa, Irrerab, & Tupmanc, 2014; Sanderson, 2004, p. 49–50). As some of these organizations turned to criminal activity to fund their operations, scholars began to write about these activities as a "nexus, a confluence, a continuum, or some kind of paradigm involving fluid, constantly changing relationships among members of terrorist and criminal networks" (Laqueur, 1999, p. 173). This metaphor rests on an understanding that crime and terror are distinct phenomena and the idea that crime is motivated by a range of factors but that terrorism is primarily driven by ideology (Forest, 2012, p. 171). In his seminal work, Hoffman makes this clear, noting: "The terrorist is fundamentally an altruist: he believes he is serving a 'good' cause designed to achieve a greater good for a wider constituency … the criminal, by comparison, serves no cause at all, just his own personal aggrandizement and material satiation" (1998, p. 43). Similarly, Sanderson (2004) highlights how, despite the fundamental differences between criminal and terrorist organizations, the availability of weapons, corruptible officials, and fragile states pave the way for the convergence and transformation of criminal and terrorist organizations. For him, there are persistent connections, but actual fusion is less likely. He writes:

> While criminal and terrorist groups do appear to be moving closer together and have shared strategies, tactics, and resources, significant roadblocks to further cooperation exist. There remain cultural, operational, and practical differences between the two groups. No organized crime group is built around adherence to religious or ideological tenets, while groups like al-Qaeda or Hamas are fundamentally based on religious beliefs and motivations. For example, the removal of secular or corrupt leaders is a goal of many terrorist groups. By contrast, the existence of these very leaders is essential to the existence of certain organized crime groups (Sanderson, 2004, p. 55).

Indeed, analyzing over 100 definitions of terrorism, Schmid and Jongman (2005) found that political aims, just behind the use of violence, were the second-most common concept in these definitions.

Empirically, these definitional distinctions do not hold up well. Engaging in violent anti-state activities, which are often targeted at innocent civilians, limits the ability of groups using terrorist tactics to a fundamentally "altruist" posture. There is ample evidence that both criminal and insurgent groups use terrorist tactics to advance their interests. Similarly, insurgent groups also use criminal strategies to raise money, such as what occurs when a group such as the FARC kidnaps to support its war effort, or when, as Claire Metelits has made clear, guerilla organizations under threat from other combatant groups adopt predatory economic behaviors to improve their odds of survival (Metelits, 2010). Focusing on what are perceived to be more explicitly criminal actions, Donald Black (1983) has argued that a great deal of crime can be seen as social control embedded in wider ideologies. More sophisticated organized crime structures often adopt rhetoric that suggests that their criminal actions may be undergirded by ideological logics capable of generating some social legitimacy (Gambetta, 1993; Arias, 2014). Understanding the nature of the debate on the crime–terror nexus requires first looking at how scholars talk about regime opponents engaging in criminal activities and criminals utilizing terrorist violence to achieve different ends.

Insurgents Using Crime

The debate about the relationship between crime and terrorism begins with the strategic concern around the pecuniary criminal activities that violent extremist groups employ to support their ideological goals. The confluence of organized criminal activities and terrorist violence can pose significant threats to governments and populations as a result of the robust economic support that crime can provide to violent extremists and the way that promiscuous contacts between these types of groups strengthens the social, organizational, and intellectual capital of groups seeking to use force to alter state policy or leadership.

The debate about the crime–terror relationship has been politicized from its inception. Narratives around these activities emerged in the 1980s when insurgents in the Andes, who had long supported their armed operations through illegal activities, developed ties with coca growers and distributors that helped to fund their operations. The term "narco-terrorism" was first used by Peruvian president Belaunde in 1983 (Hübschle, 2011) in reference to guerilla groups that supported themselves at least in part with funds earned through drug trade (Cornell, 2005, p. 757). Similarly, Revolutionary Armed Forces of Colombia (FARC) and the Colombian National Liberation Army (ELN), groups long involved in kidnappings and extortion, became involved in the growing narcotics market to support their political activities (Treverton et al., 2009). In 1988, Grant Wardlaw cautioned against such simplistic labels:

> "Traffickers and terrorists are each seen in isolation as considerable threats to the welfare of states and the international system, but their conjunction is seen as even more frightening and sinister […] much of the debate about these linkages, and the fears and responses generated by them, is based on an inadequate analysis of the problem. One basis of this inadequacy is continual reference to a phenomenon known as "narcoterrorism." This categorizes and combines together a wide range of different sorts of links between drug traffickers and a myriad of different exponents of political violence. By treating this disparate group, with widely divergent motives and types of relationships with drugs, as a coherent entity we have failed adequately to define the nature of the threat posed by the drug/political violence linkages and have often descended merely into emotive name-calling and scaremongering. The catchword "narcoterrorism" therefore needs to be examined seriously to determine its adequacy as a pivotal concept in this debate (Wardlaw, 1988, p. 5)."

Despite Wardlaw's efforts, such labels remained in vogue and, over time, expanded to other world regions.

With the end of the Cold War and, later, the dramatic geopolitical shifts that came with the September 11, 2001, terror attacks, there has been increasing concern that ideologically oriented insurgents would develop the capacity to operate in and exploit criminal marketplaces in support of conflict across the globe. Some suggest that the primary reason behind the spike in crime–terror interactions was the decline of state support for terrorist organizations (Grabosky & Stohl, 2010; Hutchinson & O' Malley, 2007). Others have pointed to the pressure put on terrorist funding by the international counterterror measures adopted after the September 11 attacks (Sanderson, 2004).

It is important to note that violent extremists have a long history of engaging in illegal financing activities. Insurgents in Brazil in the 1960s undertook bank robberies and kidnappings in their efforts to organize opposition to that country's dictatorship (Gaspari, 2002). Similarly, the Baader-Meinhof gang, Huk Rebels, and Provisional IRA all had engaged in different types of robberies and rackets to support their operations before the end of the Cold War (Naylor, 1993, p. 24). Nevertheless, as the 1990s moved forward,

increasing attention was devoted to the complex illegal activities that armed groups engaged in to support their ideological agendas.

The literature offers insights about how terror groups engage in criminal activities to finance their operations across a variety of world regions. For instance, one report notes that the tri-border area of Brazil, Argentina, and Paraguay has become the most important center for financing Hezbollah's activities outside the Middle East, annually contributing US$20 million to the organization (Treverton et al., 2009). Hezbollah is also involved in methamphetamine production in the United States and Canada (Sanderson, 2004). Similarly, al-Qaeda operatives are connected to crime syndicates in Central Asia, as well as opium traffickers in Afghanistan and Pakistan (ibid). Felbab-Brown (2010, p. 81) reports that 50% of FARC's operational funding came from "drug rents," while kidnappings, bank robberies, and other illicit activities provided the remainder. Kenney (2003, p. 191) points out that al-Qaeda organizationally resembles a drug cartel, with its transnational network, flat decision-making structures, semi-autonomous cells, detailed intelligence gathering and analysis, and strategic adaptation. He observes that, just as drug cartels adjusted their decision-making structures by forming loose networks to evade the state counter-narcotics strategies, al-Qaeda changed its vertical decision-making regime to form loosely coupled cells. Other research has shown how the complex illicit ties maintained by al-Qaeda in the Maghreb support that organization's profitable kidnapping campaign as well as its involvement in elements of the regional drug trade (Pham, 2011, 21–24). Using aggregated data, Asal, Deloughery, and Phillips (2012) have shown that politically motivated organizations become involved in the drug trade when they strongly reject the political system that they are fighting.

A critical, but understudied, source of extremist financing is the smuggling of legal goods to augment profits through the avoidance of taxes and regulations. Freeman (2011) has argued that regime opponents have an interest in avoiding business activities that can generate greater levels of disapproval within the community that supports them. Thus, dealing drugs and kidnapping, in some cases, can have negative repercussions for the armed groups' legitimacy. Shelley and Melzer (2008) have shown that both the PKK, operating in collaboration with R.J. Reynolds, and Hezbollah, have engaged in cigarette smuggling to support their operations (see also Sanderson, 2004). Insurgent groups in the Niger Delta make good profits through oil bunkering, in which petroleum is stolen from local pipelines and then resold in support of these groups' political activities (Watts, 2007:645–650). Similarly, diamonds have provided financing for conflicts in various parts of Africa (Le Billon, 2006:782–783).

Criminals Using Terror

The interactions of crime and terror, however, also go in the other direction. While this issue has drawn markedly less attention, there is considerable evidence that primarily criminal organizations use terror to promote their political projects. Organized criminal groups, however, are often reluctant to use violence to political ends. Where there are real incentives for violent extremists to use crime to raise money, economically focused criminal groups generally have little interest in markedly changing the status quo, because these groups derive profits by exploiting the existing structure of the laws to deliver not-otherwise-available goods and services to their clients. Perhaps most importantly, economically oriented crime groups make a great effort to not draw attention to their primary activities. Terrorist acts are designed specifically to draw attention to the demands of the group undertaking those activities.

There is significant evidence of crime groups using terrorist actions to put pressure on governments to change their policies toward those groups, to affect electoral outcomes, and to shift the behavior of other criminal organizations. In early 1990s, Sicilian Mafia resorted to bomb attacks to challenge state efforts to bring members to justice and to reduce prison sentences (Grabosky & Stohl, 2010, p. 7; Pantaleone, 2013). Martin (2010, p. 322) notes that Sicilian Mafia, the Neapolitan Camorra, and the Calabrian N'drangheta have employed corruption, bombings, assassinations, and other terrorist acts to silence criticism, counter opponents, and undermine state policies. Pablo Escobar and other gangsters from Medellin pursued a vicious battle against the Colombian state that left hundreds of police personnel and scores of judges dead. They engaged in acts of mass terror, including the bombing of an airliner that killed 107 travelers (McFadden, 1994) and murdering a leading candidate for that country's presidency (Corbett, 2014).

Shelley (2014, p. 45) shows a similar pattern in the May 2006 attacks by the Primeiro Comando do Capital, a prison-based gang that dominates many criminal rackets in São Paulo, that left 261 dead. These attacks were designed to pressure the state government to loosen certain restrictions within prisons. At a deeper level, Shelley (2014, p. 44) argues that the attacks, carried out 5 months before presidential elections, were also meant to derail the presidential campaign of the governor of São Paulo whose campaign message rested on claims that his anti-crime policies had restored order in that city's shantytowns. In Rio de Janeiro, gangs protesting prison conditions and police tactics have issued broadly gauged threats to shut down commercial activity in particular neighborhoods and in the city as a whole, and have firebombed public buses (Penglase, 2005; Barnes, 2010). Mexican drug-trafficking organizations (DTOs) have engaged in an array of attacks in the past decade that have included hanging bodies from highway overpasses, leaving severed heads in public places, killing 52 people by burning a casino in Monterrey, and massacring 43 student protestors in collaboration with police and elected officials in Iguala (Peralta, 2012; CNN Wire Staff, 2011; Flannigan, 2010; Dudley & Gagne, 2014).

Some argue, however, that merely engaging in acts of mass violence does not turn a criminal organization into a terrorist group. In his study of Mexican DTOs, Williams (2012) argues that, despite the murder of many innocents including journalists and local officials, the lack of underlying ideological goals, the continued centrality of economic interests, and the highly focused nature of violence suggest that these groups are not, in a basic way, terrorists. Williams (2012) also makes the point that DTOs are not running an insurgency against the state so much as maintaining an alliance with elements of it to achieve their economic goals. Hutchinson and O'Malley (2007) similarly argue that, in the post-Soviet and post-September 11 context in which it is challenging for terrorists to find funding, terrorists are forced to come together with crime groups. Such relationships, however, are "temporary and/or parasitical rather than symbiotic" (Hutchinson & O' Malley, 2007, p. 1096). These partnerships are forced by the political and ideological aims of terror groups rather than by an underlying transformation of these groups into criminal organizations.

A number of studies, however, have provided a broader theoretical framework through which to understand the significance of terrorist acts undertaken by primarily criminal groups. In her discussion of Mexican and Colombian DTOs, Duran Martinez has argued that these organizations undertake highly visible acts of violence when the state is disorganized and weak (Duran-Martinez, 2015). The violence that these groups undertake seeks to make demands of the state, to affect the behavior of other armed groups, and to affect the populations they seek to control. In their study of the Neapolitan Camorra, Toros and Mavelli (2013) take these arguments in a new direction. Drawing on Foucauldian biopolitics, they

argue that criminally driven terror contributes to "a more efficient management of the population" (ibid, p. 79). In this framework, the state criminal alliances observed by Williams are built more deeply into social interactions. Toros and Maveli argue, citing Frederico Verese, that the Camorra serves the purpose of managing most poor sections of the city, and thus are not just thugs, but are "an organization that provides genuine services, such as access to cheap loans, a degree of competition among firms, and enforcement of economic agreements" (Varese, 2009, p. 262, cited in Toros and Mavelli 2013). In this context, not only do distinctions between crime and terror disappear, but so too do the distinctions between organizations engaged in these activities and the state, since their role in localized governance can easily become functions of wider government behaviors (Arias & Goldstein, 2010). Indeed, Arias has argued (2006, 2013, and 2014) that powerful criminal organizations in Rio de Janeiro collaborate with state actors to produce different systems of micro-level orders that help maintain both localized criminal dominance and entrenched corruption in state legislatures and bureaucracies.

The Crime–Terror Nexus

There exists a vast literature focusing on tactics and strategies shared by crime and terror groups in pursuit of mutually beneficial goals. Gallagher (2014, p. 320), in his case study of Scotland, illustrates the point that contacts between crime groups and terrorists are based on the pragmatic understanding that it is "cost effective" to hire outside experts to assist these groups in undertaking criminal activities. Empirical work on D-Company, a Mumbai-based criminal group, also lends credence to this argument. A transnational criminal organization engaged in different criminal activities spanning Africa, South Asia, and the Middle East, it shares smuggling routes with al-Qaeda, helping the latter to move diamonds and gold and convert them to cash (Farah, 2004). It is also known to finance the terrorist activities of jihadi organizations such as the Lashkar-e-Taiba (LeT), Lashkar-e-Jhangvi (LeJ), Taliban, and al-Qaeda (Clarke, 2011). With its expertise and transnational connections in the trafficking of drugs, weapons, and other contraband, the D-Company model presents attractive options to terror groups.

The core of the debate on crime–terror interactions lies in an analysis of the ways the idea of a crime–terror nexus or, as others have put it, a continuum that brings together these two sets of practices, opens spaces for the transformation and hybridization of economically and ideologically motivated violent actors in a variety of global contexts. The "nexus" metaphor, which evolved in the 2000s, sees a more vigorous connection between crime and terror. Makarenko (2004), an early advocate of this approach, argues that technological advancement and global market structures in the post-Cold War world paved the way for blurring the line between crime and terrorism. She identifies a spectrum that plots organizational and operational aspects of interaction between the two phenomena. At the outer ends of this spectrum are terrorists and criminal groups that engage in strategic alliances with each other to accomplish an array of objectives. As the spectrum converges, it becomes more difficult to disentangle activities, with both criminals and terrorists internalizing the practices of their counterparts. This can lead to criminals or terrorists transforming into one or the other type of organization, but can also lead to a center point that Makarenko refers to as the "black hole syndrome," in which regime opponents or states themselves become sustainable criminal enterprises, contributing to significant regional instability. Similarly, Dishman (2005) argues that, in the aftermath of the September 11 attacks, fear of

international law enforcement caused criminal and terrorist organizations to build decentralized structures that created conditions more amenable for low–mid-level criminals and terrorists to form ties and work together. Finally, Leavitt (2004) points to the shadowy world of the crime–terror nexus and its role in supporting the financial viability of terrorist organizations.

Building on these basic approaches, other writers have emphasized hybridization and the transformational path of both criminal and violent extremist organizations. Observing the fading distinctions between crime and terror, Shelley and Picarelli (2005) advocate for an intellectual approach focused on examining "methods, not motives" in crime–terror interactions. They argue that criminals and terrorists appropriate each other's activity, seek expertise from each other, and, in the process, form a *nexus*. As the two groups work together on a more regular basis, they start to share each other's methods and motives, creating a *symbiotic relationship*, which over time leads to the two groups fusing, becoming a *hybrid*, or in some cases leads to a *transformation* in which a crime or terror group drops one identity in favor of the other. In 2006, Picarelli pointed to the emergence of polymorphous networks among "sovereign-free" crime and terror groups operating in an extra-state space (Picarelli, 2006). More recently, Picarelli (2012, 181) has highlighted the possibilities of crime and terrorist groups merging in the new international environment, calling for further research to understand the depth of these prospects. Eccarius-Kelley (2012, 236) has shown the nuanced ways that the FARC and the PKK have internalized criminal activities, undergoing significant organizational transformations and generating different types of "hybrid subsidiaries." Oehme (2008, 90) points to the challenges that this "nexus" of criminal–terrorist collaborations and hybrid organizations pose to building policy responses. Rosenthal (2008:481) has argued that the process of mutation and adaptation of terrorist and criminal groups has led to the threat of "for-profit" terrorists. Such a development adds an ideological veneer to carrying out of crimes such as kidnapping and extortion. Roth and Sever (2007, 901–904, 913–914) have pointed to the deep integration of crime into the activities of the PKK and the increasing difficulty in distinguishing that group from other organized crime clans in the region. In essence, while there are differences of opinion as to what constitutes a nexus, the existing literature offers an extensive repertoire of ideas that attempt to understand the complexity of crime–terror interactions.

Recent work has shown that the crime–terror nexus is not a fixed set of relationships. Instead, it operates in many cases as a cycle, pattern, or process that changes over time, depending on the needs of these armed groups and the environments they operate in. For instance, O'Brien (2012) argues the Abu Sayyaf group (ASG) is increasingly focused on fundraising activities as opposed to pursuing ideological grievances. Driven by finances, it has raised over US$35 million in 16 years through criminal activities (ibid). O'Brien (2012) plotted ASG kidnapping activities from 1991 to 2011 and observed that the diminishing influence of its ideology and the attraction of money could have contributed to this shift. Eccarius-Kelly (2012), in her comparative analysis of the FARC and Kurdistan Workers Party (PKK), shows the conditions under which organizations oscillate between terrorism and crime. Both groups have transformed themselves to adapt to changing policy contexts. In response to the kingpin strategy that targeted leadership, the FARC developed a more decentralized structure. As a result, decision-making authority was devolved to field commanders, enabling them to pursue narcotics-driven profits for their units. Guerrero (2011) has shown how a similar dynamic has driven a decentralization process among Mexican DTOs. On the other hand, Eccarius-Kelly has shown that the PKK, Turkey's most prominent guerilla organization, operates in an "octopus-like manner," extending its reach abroad.

Although the PKK struggles to maintain organizational coordination, it still manages to keep its hold over criminal and guerilla branches. Eccarius-Kelly argues that both the FARC and the PKK have managed to survive through "organic survival mechanisms" such as the production and trafficking of illicit drugs and organizational restructuring. These cycles of crime and terror illustrate the flexibility and ingenuity of these groups to survive in changing environments.

Finally, another sector of the literature focuses on the kind of environment that facilitates crime–terror interactions. These analyses emphasize what could be called a geographical division of violent labor that enables organized crime, insurgency, and terrorism. Although places with strong shadow economies, fragile forms of governance, and ongoing conflicts provide favorable conditions for a breakdown of social control (Shelley & Picarelli, 2005), the presence of organized crime and terrorism is not confined to these places.

Shelley (2014, p. 3) argues that a robust legitimate economy and the tacit complicity of financial institutions in wealthy countries contribute to crime–terror interactions and finance expensive terror attacks. Important international terrorist and criminal activities take place in wealthy and middle-income countries. Shelley shows, for example, that al-Qaeda in the Islamic Maghreb (AQIM) and other insurgent groups have earned as much as US$130 million in the last decade from kidnapping Canadians and Europeans in North and West Africa. Governments in continental Europe and corporations whose workers were kidnapped have paid these ransoms.

Similarly, Aidan Hehir has shown that different types of sovereign political spaces, such as failed, weak, and strong states, play very different roles in terrorist activities. He argues that established democratic states provide both a recruiting ground and a site where terrorist activities can have a real impact, whereas sites of failed state power tend to produce fewer terrorist groups and terrorist actions (Hehir, 2007, 327–329). Hehir suggests that, in some ways, spaces of failed sovereignty can enable terrorist groups.

This concept coupled with Shelley's analysis points to sites of limited state power providing important bases of terrorist training and certain types of fund raising, while more organized political spaces provide sites for operations. Several other scholars support these concepts. Moving beyond the notion of failed states as sites of the crime–terror nexus, Makarenko and Mesquita (2014) identify linkages between organized crime and terror in Western European democracies. Bie, Poot, and Leun (2014) focus on how illegal immigrants are attracted to jihadi ideology in the Netherlands due to the deprivation and challenges they face living in that country. Lewis (2014) argues that linkage between organized crime and the state need to be studied in more depth, and makes this case using the example of Central Asia where relationships between crime and terror are historically short-lived.

An Alternative Formulation of Crime–Terror Interactions

The formulations of crime–terror dynamics discussed in the preceding text have some core limitations. At heart, this approach to understanding criminal and political violence is based on an attenuated notion of the actors involved in these relationships. At the most basic level, the "crime–terror nexus" debate misses the underlying issue that ideological terrorists are subsets of regime opponents, such as insurgents or violent extremists who have decided to use certain tactics to achieve their goals, just as economically focused criminals who adopt terror tactics are subsets of a universe of criminals who may or may not use terrorist tactics. The narrative of crime–terror interactions, thus, suffers from an

asymmetry, in that it recognizes the existence of non-terrorist criminals but largely over-looks the presence of non-terrorist insurgents, and the dynamics that may push those insurgents to adopt terrorist tactics. This lack of symmetry makes it difficult to understand conditions under which regime opponents may want to disengage from terrorist activities. Perhaps more important, the model makes it difficult to understand conditions under which non-terrorist insurgents may choose to engage in criminal activity. This more com-plex model opens a separate pathway of crime–anti-regime interactions that may or may not lead to terrorist activities, and it also opens up space to consider how both regime oppo-nents and criminals may step away from terrorist activities, all while continuing criminal and/or opposition activities. Such a shift in analysis also enables scholars to step away from narratives developed by state officials who seek, for political benefit, to characterize large numbers of criminal and opposition groups as terrorists even when their activities may not warrant such a label.

This brings us to another under-theorized element of these interactions. A number of writers we have discussed here make tangential reference to the connections between state actors and crime–terror interactions. There is a long and documented history of the strong interactions between states and organized crime (Arias 2006, 2013). Sanderson (2004) has pointed toward the importance of state contacts to criminal activities. There are also important examples of the connections between state officials and insurgent groups (Staniland, 2012) as well as between states and terrorist organizations (Sanderson, 2004; Lewis, 2014). Indeed, as Flannigan (2012) has pointed out, armed insurgents accused of terrorist activity may wield power over local government officials and engage in their own complex and nuanced governance projects. There is also a growing realization that crime–terror interactions not only affect formal state structures but also impact different foci of power. For instance, in the case studies of Iraq and Afghanistan, Schroefl and Kaufman (2014, p. 862–863) point out that the forces that drive actors do not converge around a single political or ideological struggle. Neither the state nor the "insurgents" constitute coherent actors, but rather loosely associated groups of actors pursuing partially overlap-ping goals. The same actors play multiple and partially conflicting roles. Organized crime, factional squabbling, and tribal conflict are intertwined. They point out the transnational nature of government and insurgents. Transnational crime networks, diaspora links, legiti-mate international trade, and the intervention of a range of foreign states and international non-state actors sustain both organized crime and terrorist violence.

This all suggests the importance of better incorporating the state into models of crime–terror interactions. Makarenko (2004) notes these connections in the center "black hole" point where terrorists, criminals, and state actors converge in a highly destabilizing config-uration. This, however, is a very limited view of the presence of the state in these interac-tions. Governments can develop nuanced connections and bases for supporting criminal, insurgent, and terrorist activity. These actions can have subtle or highly destabilizing effects. They may help politicians win office, control elements of the population, and develop support for certain types of laws; they can be used in governing certain types of spaces; or they may play a role in destabilizing foreign governments or military operations. Such a more nuanced view can help explain the connections between the United States' government support of anti-Soviet Mujahedeen in the 1980s. It can also explain the complex alliances that the Uribe government developed in Colombia with paramilitaries in his efforts to win national electoral support, maintain a powerful coalition in congress, and govern areas where there had long been guerilla presence. These complexities bring the state into contact with criminals and insurgents who may engage in terrorist activities, but in ways that do not

necessarily produce any underlying political instability. Understanding the nature and dimensions of these relationships can help provide a more nuanced picture of these interactions and their patterns.

In the end, crime–terror interactions are a smaller portion of a wider set of connections between different types of actors employing both legitimate and illegitimate violence to achieve political and economic ends. A critical examination of interactions across these groups suggest a much more complex set of relationships than are revealed in the current literature in which the actions of states, criminals, and insurgents intersect in different ways to produce multiple types of violence. Such a model also moves us, at least a bit, off the highly politicized terrain around the concept of "terrorism" in which any number of dangerous regime opponents or criminals may be accused of such behavior to further state campaigns against those groups. A clear handle on the complex dimension of these interactions can help explain different patterns of violence and instability and offer possible solutions not foreseen in the much narrower crime–terrorism nexus.

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Similar from a Distance: A Comparison of Terrorism and Hate Crime

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Introduction

Social scientists have written extensively about the topics of hate crime and terrorism, but rarely are these themes discussed in the same scholarly context. The two research agendas have at times intersected (Hamm, 1993; Krueger, 2007; Ronczkowski, 2012), yet it remains an open question whether these behaviors are rightfully placed on the same continuum, and whether knowledge of hate crime can legitimately inform the study of terrorism, and vice versa. On the one hand, terrorism and hate crime appear to have much in common. Each behavior is a punishable offense; in each case, perpetrators select targets because of their group affiliation rather than any characteristic specific to the victims; and, in each instance, the offenders seek to intimidate or send a message to a broader audience. Sometimes the language used by perpetrators conflates the two, such as when terrorists preach hatred in connection with their attacks (Lawrence, 2005, p. 202) and hate crime offenders seek to terrorize victims (Levin & McDevitt, 1993, Ch. 1). In some cases, law enforcement even classifies the same incident as both a hate crime and an act of terrorism, as was the case for the 2012 shooting at a Sikh temple in Wisconsin (*IBN Live*, 2012). These and other commonalities lead Krueger (2007, p. 15) to view hate crime and terrorism as "close cousins."

Yet, an informal comparison of these two behaviors could just as easily lead us to the opposite conclusion. For instance, the profile for hate crime perpetrators tends to resemble the profile for criminals in general—an intoxicated young man with a criminal record who lacks ties to an ideological group and has no strong political convictions (Dunbar, 2003; Messner, McHugh, & Felson, 2004). This hardly sounds like the prototypical terrorist, who is likely to premeditate his attacks, and in many cases acts with the backing of an organized network (LaFree & Dugan, 2004). For this reason, cases such as the Sikh temple shooting are more the exception than the rule. Indeed, by one estimate, only 3–5% of the terrorist attacks on US soil included in the Global Terrorism Database (GTD) are duplicated in the hate crime statistics of the Federal Bureau of Investigation (FBI) (Deloughery, King, & Asal, 2012, p. 2). If we were to look no further, we might surmise that hate crime and terrorism

look alike from a distance, but that their dissimilarities emerge upon closer inspection. In this chapter, we draw on extant scholarship to assess whether this is, in fact, the case. We also go beyond simple comparison to consider other ways in which these behaviors could be connected. For instance, we examine whether they are related in a causal way, and, if so, in which direction the causal process operates.

This comparative assessment of hate crime and terrorism is consequential for two related reasons. The first has to do with how we build a body of knowledge about the respective topics. Hate crime could indeed be a subset of terrorism, but it could also be a subset of street crime, or even prejudice. Our conceptual understanding of the behavior will influence the theories, variables, and units of analysis we employ in researching the topic. The same can be said of terrorism. If we view it as asymmetric warfare, then certain theories come to the fore. Analysis of the issue would highlight relative interests of the actors (Mack, 1975) or counterinsurgency strategies (Arreguin-Toft, 2005). Conversely, if we understand terrorism through a criminological lens, then another set of assumptions surfaces. Explanations would likely revolve around socialization of actors and the level of concentrated disadvantage or diversity where terrorism occurs (LaFree & Bersani, 2014).

A second consequence has to do with how we relate the two bodies of knowledge to each other. If we understand these behaviors as essentially similar phenomena, then we can freely import knowledge from one domain to help understand the other. For instance, suppose that we view lynching as the prototypical hate crime, and we further assume that hate crime and terrorism are on the same continuum of collective violence. Some research on lynching finds that economic conditions drove lynching in the early twentieth century (Hovland & Sears, 1940; Hepworth & West, 1988; see Green, Glaser, & Rich, 1998, for counterargument). Syllogistic reasoning would lead us to hypothesize that terrorism also increases with economic hardship, which in turn could influence how governments seek to address the causes of terrorism.[1] However, if it turns out that racially motivated lynching is fundamentally different from terrorism, then any inference from economic conditions could be erroneous. This scenario is not entirely hypothetical, as terrorism scholars have at times made inferences from hate crime research (e.g., Krueger & Malečková, 2003), and hate crime scholars sometimes treat the subject as a subset of terrorism (e.g., Levin & McDevitt, 1993).

In the end, we arrive at two conclusions in light of prior theory and research. First, the ostensible similarities between hate crime and terrorism give way to important differences upon close inspection. Once we pick apart the characteristics of the offenders, the targets, the modus operandi, and the contexts in which the acts unfold, we think hate crime and terrorism are distinctive behaviors, and that knowledge of one tells us little about the other. Second, that they are distinct types of behavior does not imply that analysts should separate them entirely. In fact, research shows that they are correlated in specific, patterned ways.

Definitional Properties

An obvious starting point for comparing terrorism and hate crime is to examine how they are defined. This endeavor is complicated because definitions vary—sometimes wildly—across sources. Here, we use definitions employed by the FBI and GTD for purposes of quantifying hate crime and terrorism, respectively.[2] The FBI defines hate crimes as "criminal offenses against a person or property motivated in whole or in part by an offender's bias against a race, religion, disability, ethnic origin, or sexual orientation" (United States

Department of Justice, 2014). Compare this with the definition of terrorism provided by GTD—"the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation" (LaFree & Bersani, 2014, p. 462).

Each definition incorporates four elements. First, and most obviously, each refers to *criminal behavior* ("criminal offense" or "illegal"). A second definitional characteristic refers to the *perpetrator*, which is stated explicitly as non-state actors when defining terrorism, and we can safely assume that this is implicit in the definition of hate crime as well. In the United States, for instance, prosecutors are unlikely to indict a local government, let alone a foreign state, so in both cases we are dealing with crimes committed by civilians. State actors can perpetrate violence motivated by hatred (e.g., genocide), but mass killing is the extreme exception of a crime motivated by hatred. Third, both definitions make reference to *motive*. Each requires some animus against the target and assumes an attempt to affect a larger group, not just the individual target. On this note, each definition explicitly mentions religion, and the "social goal" text in terrorism encompasses the motives enumerated in the hate crime definition.

So far, these three definitional properties suggest commonality between hate crime and terrorism. They are crimes generally perpetrated by non-state actors with a goal of intimidating or expressing prejudice against another group. It is thus fitting that hate crime scholars draw connections between the two, for instance by noting that hate crime offenders have a "desire to terrorize a broader social group" (Green et al., 2001, p. 483) or arguing that hate crime is essentially a form of terrorism (Herek, Cogan, & Gillis, 2002). Yet, the fourth element of each—the degree of violence and the target—is an important distinction. The FBI's definition of hate crime refers to "persons or property" as targets, while GTD is explicit about the use of force or violence. This difference is not merely academic. By definition, terrorism must entail violence or, at a minimum, forcefully attack infrastructure. Yet, many hate crimes are non-violent and non-destructive in nature. For instance, the three leading offense types reported in the FBI's 2013 summary of hate crimes in the United States were vandalism or damaging property (30%), intimidation (26%), and simple assault (24%; see United States Department of Justice, 2014, Table 2). These proportions are comparable with the distribution of offense types in England and Wales, where the methodology and definition of hate crime is compatible with standard practice in the United States. Of these English and Welsh offenses, 55% were "public order"—which includes offenses described as causing fear and is thus akin to "intimidation" in the US data—and less than a third were violent offenses against persons (Creese & Lader, 2014). These distributions are worth noting because if hate crimes are referring to far less severe offenses—many of which entail no violence or force at all—then we might question whether knowledge about hate crime truly informs the study of terrorism.

In sum, there is some overlap with respect to definitional properties, but the role of violence allows for much daylight between terrorism and hate crime (see Table 25.1, row A, for an overview). For example, there is consensus that an act of terrorism must—by definition—entail violence or the threat of violence, but that same standard does not apply to hate crimes. We focused primarily on hate crime definitions used by law enforcement in the United States, where a robust constitutional commitment to freedom of speech makes it extremely difficult to prosecute hate speech detached from a concurrent criminal offense—such as engaging in derogatory speech about a marginal group—unless the act directly incites others to commit violence (Levin, 2001, 2002). The distribution of violent to non-violent hate crime offenses would tilt toward the latter if we incorporated "hate speech"

Table 25.1   Summary of Similarities and Differences Between Hate Crime and Terrorism

Criteria	Similarities	Differences
A. Defined behavior	• Both are criminal acts with goal of intimidation • Tend to be perpetrated by civilians • Manifestations of inter-group conflict	• Range of motives. Terrorism includes broader array of motivations, such as environmental or political • Most definitions of terrorism require violence
B. Conceptual properties	• Expressing disdain toward a group • Often expressing grievances	• Direction of action. Hate crime more often has victim of lower status than offender
C. Demographic profile	• Primarily young male perpetrators	• Terrorism more likely than hate crime to have educated perpetrators
D. Contextual factors	• Macro-economic conditions not strong predictor of either • Some evidence that contested turf is driver of both behaviors	• Racial demographics more strongly associated with hate crime
E. Nature of crime	• Both tend to be highly spatially concentrated	• Terrorism more often lethal; attacks more likely to be planned in advance • Terrorism more likely to involve the use of weapons

offenses into the definition. For instance, the German equivalent to US hate crime laws are noticeably broader, encompassing some non-violent acts such as defamation (Hummel, 2012), and legislation in India is so comprehensive as to effectively prohibit any speech that is potentially offensive to anyone on religious grounds (e.g., *BBC News*, 2006; Burke, 2014; *Times of India*, 2007; Taylor, 2009). Given these widely divergent definitions of what constitutes a hate crime, it is clear that establishing a consistent basis for comparison with terrorism could be challenging. Furthermore, terrorist attacks in the name of environmentalism, socialism, animal rights, or animus against the federal government would unlikely be prosecuted as hate crimes. Terrorism includes a broader range of grievances, including economic or political goals, than what appear in hate crime statutes.[3]

Conceptual Properties

If we step back from specific definitions and consider the behaviors more broadly, then hate crime and terrorism might have some conceptual similarities. For instance, both share the aim of intimidating a broader social or political group than just the persons targeted by the crime itself (Green, McFalls, & Smith, 2001, p. 483; Herek et al., 2002). For this reason, some scholars view them as variant manifestations of the same underlying type of crime. Krueger and Malečková (2002, p. 28) characterized them as "close cousins" because, in each case, "the target of an offense is selected because of his or her group identity, not because of his or her individual behavior, and because the effect of both is to wreak terror on a greater number of people than those directly affected by violence." In addition, the two behaviors often express or call attention to grievances—for instance, about topics such as immigration, foreign troops on a country's soil, or environmentally unfriendly practices.

Yet, comparing other aspects reveals two important differences. One relates to what sociologist Donald Black (1976, 1989) calls the *vertical direction* of conflict. Black posits that conflicts can be upward or downward, with upward conflict involving an aggressor of a lower social standing than the target, and downward crime having an offender of higher status than the victim. Black argues that terrorism nearly always has an "upward direction" (2004, p. 13), with IRA attacks against British targets in Northern Ireland being one obvious example. Yet, hate crime more often involves an offender from a superordinate group (e.g., whites, Christians, or heterosexuals in the United States) and victims drawn from marginalized populations. For instance, anti-black hate crimes are three times more common in the United States than hate crimes targeting whites (United States Department of Justice, 2014). By the same token, anti-Islamic hate crimes are more frequent than anti-Protestant crimes, and anti-homosexual attacks are more common than anti-heterosexual offenses. We readily acknowledge that upward hate crimes occur, for instance, black-on-white or Muslim-on-Christian (in the American context), but they are much less common. The modal hate crime is downward, while the typical terrorist attack is upward.

A second difference between hate crimes and terrorism has to do with the scale and organization of the crimes. Black (2004) conceptualizes terrorism as "unilateral self-help by organized civilians who covertly inflict mass violence on other civilians" (p. 10). His references to "mass violence" and "organized civilians" rarely apply to hate crimes, at least the types of hate crimes typically reported in the FBI's Uniform Crime Reports. Black implies as much when writing that "to classify terrorism as crime is the surest way to obscure its sociological identity and obstruct its scientific understanding" (p. 12). His claim is unsound on legal terms—terrorism is undeniably a crime—but he makes a valid point when arguing that the study of terrorism should not merely fall within the domain of criminology. Hate crimes, such as those reported in the FBI annual reports, tend to be conventional street crimes that rarely have the objective of mass violence and are infrequently perpetrated by "organized civilians." Conventional crime is typically not planned in advance (Gottfredson & Hirschi, 1990), and it appears that the same applies to hate crimes. For instance, Messner, McHugh, and Felson (2004) find that hate crime offenders are motivated more by criminal propensity than by bias. They tend to be versatile offenders who engage in all sorts of illicit conduct rather than hate crime specialists.

In sum, when stepping back from the specific definitional properties and instead considering hate crime and terrorism at a broader conceptual level, similarities between the two exist only at a high level of abstraction (see Table 25.1, row B). Following Black's corpus of work on crime, terrorism, and social control, terrorism and hate crime often differ with respect to the relative power of offenders and victims and the degree to which offenders are organized.

Correlates and Determinants

Demographic Profiles of Perpetrators

If a central question of this chapter is whether hate crime offending and terrorism are comparable offenses, then it seems prudent to first assess whether perpetrators of each behavior are similar. We set the bar low when making this comparison. For instance, we do not expect the mean age or median income of hate crime offenders to match the central tendencies of terrorists. Rather, we look at general tendencies and correlations

with core demographics such as age, gender, and socio-economic status. Row C of Table 25.1 summarizes these comparisons.

Criminological research tells us that crime is a young man's game. Males are arrested at rates far beyond women, and offending over the life course peaks in late adolescence and young adulthood, with 14–24 representing the most crime-prone years (Gottfredson & Hirschi, 1990). Terrorism and hate crime generally fit this mold. Hate crime research from the United States finds that offenders are disproportionately young and male (Garofalo & Martin, 1993), which parallels what we know about terrorism (Bhui, Warfa, & Jones, 2014; Krueger, 2007, p. 37, Table 1.6), right-wing extremism (Kimmel, 2007; Sitzer & Heitmeyer, 2008; Willems, 1995), and perpetrators of genocide (Brehm & Uggen, 2015). Granted, the elderly and women also commit crime—including hate crimes and acts of terrorism—but their rates of involvement are far lower than those of young men.

Tempting as it is to use the age and gender correspondence as evidence of similarity, we must remember that many other behaviors also fall into the "young male" column. Football players and graduates of military schools are overwhelmingly young and male, yet comparisons to terrorists are ill advised. We would be more convinced if variables such as education act on hate crime and terrorism in similar ways.

Canvassing the existing work on the latter topics led us to an unbalanced set of studies, with research on terrorism outnumbering studies of hate crime. Yet, enough is there to make a prima facie case that education has a different correlation with hate crime than it does with terrorism. It *appears* that hate crime offenders are disproportionately drawn from the ranks of the less educated. We hedge on this assertion because correlational analyses that directly test for an association between education and hate crime are in short supply; however, research shows that hate crime offenders look a lot like non-hate-crime offenders on many other metrics, and we see no reason why this would differ for education. As mentioned in the preceding text, the age–crime curve for hate crime offenders mirrors that of the average burglar. In addition, many hate criminals were under the influence of drugs and alcohol at the time of offense (Messner et al., 2004), and a majority of them have prior criminal convictions (Dunbar, Quinones, & Crevecoeur, 2005). And, much like crime in general, about half of hate crime offenses involve offenders and victims who know each other in some capacity. Given the demographic resemblance of hate and non-hate criminals, we are not stretching the rules of logical deduction by surmising that hate crime offenders are disproportionately drawn from the population with a high school degree or less. Indeed, research using German data suggests a negative correlation between education and likelihood of offending (e.g., Krell, Nicklas, & Ostermann, 1996; Sitzer & Heitmeyer, 2008; Willems, 1995).

If we are correct, then we have a clear difference separating hate crime offenders from terrorists. The research seems pretty clear on this point—terrorists are as likely, or perhaps *more* likely, than the general population to be reasonably well educated. Krueger (2007) is particularly convincing on this issue. His analysis of 129 deceased Hezbollah militants shows that they were less impoverished and better educated than the Lebanese population at large. Kavanagh (2011) also argues, based on research into the backgrounds of Hezbollah suicide bombers, that higher education is predictive of participation in terrorism. An analysis of Gush Emunim, an Israeli terrorist organization, leads to the same conclusion. As Krueger states, "Gush Emunim included engineers, teachers, a computer programmer, a geographer, and a combat pilot; its members appeared to be drawn from the higher-socioeconomic-status occupations" (2007, p. 39). Sageman (2008) discerns the same relationship in his examination of the biographies of jihadists with ties to al-Qaeda, as does Hassan (2001), based on his interviews with Palestinian militants. If we may draw a parallel between

contemporary terrorist radicalization and the pathway into militant activity during the colonial period, it is worth noting that Lee (2011) likewise concludes from his investigation into the backgrounds of anti-colonial activists in Bengal during the British Raj that there was a positive relationship between education and participation in armed militancy. Specifically, he found that education correlated positively with both violent and non-violent activism, but that the subset of individuals who went on to take up arms tended to come from the lower socioeconomic stratum of the educated class. This differs slightly from Berrebi (2007), who concluded that, among Palestinians, education and wealth both correlated positively with the likelihood of becoming a suicide bomber for Hamas or Palestinian Islamic Jihad. Taken together, the relationship between education and radicalism into terrorism stands in stark contrast to its association with hate crime. We caution that much of the research we cite focuses on the Middle East, and that studies of other countries may reveal different findings (e.g., Northern Ireland), but the weight of the evidence suggests that terrorists are, on average, more educated than the population from which they are drawn, which does not appear true for hate crime offenders.[4]

Contextual Factors

A challenge to comparing these behaviors is that studies of terrorism and research on hate crime tend to focus on different regions of the world, with much of the terrorism research examining cases drawn from around the world (e.g., Gunaratna, 2002; Mousseau, 2011; Tessler & Robbins, 2007), while the bulk of research on hate crime looks at Europe and North America (e.g., Bunar, 2007; Deloughery et al., 2012; Krell et al., 1996). The two bodies of literature also differ with regard to the units of analysis that they employ. Treating entire countries as units is a well-established feature of quantitative terrorism research (e.g., Freytag, Krüger, Meierrieks, & Schneider, 2011; Gassebner & Luechinger, 2011; for a rare example of research using county-level data, see LaFree & Bersani, 2014; Freilich, Adamczyk, Chermak, Boyd, & Parkin, 2015), while research on hate crime rarely ventures above the neighborhood, city, or (at most) state level (e.g., Green, Strolovitch, & Wong 1998; Lyons, 2007).

Furthermore, it is notable that acts defined as terrorism and those defined as hate crimes differ substantially by the motivation of the offender. Although terrorism has been perpetrated out of a variety of motives ranging from religion to ecology and Marxism to racial supremacism to anarchism, the dominant ideologies in the international terrorist field since the mid-twentieth century have been militant Rightism, militant Leftism, and radical Islam (Abrahms, 2014; Berntzen & Sandberg, 2014; Robison, Crenshaw, & Jenkins, 2006). By contrast, hate crimes are much more likely to have been carried out by individuals with racist motives (Grattet & Jenness, 2001; Lööw, 1995). The hate crime frame also explicitly encompasses crimes against sexual minorities (Bunar, 2007; Herek et al., 2002), which is a concern that rarely emerges in discussions of terrorism. Such differences in the unit of analysis and primary motivations make comparisons challenging, both analytically and theoretically (see Table 25.1, row D, for an overview).

Despite these methodological differences, there is at least one criterion on which studies of hate crime and terrorism are clearly comparable: macro-economic conditions. Each literature includes multiple studies that ask whether terrorist attacks and hate crimes increase when the economy declines. The bulk of the evidence suggests they do not. For instance, among the best empirical work on hate crime and economic conditions is that of Donald Green and his colleagues (Green et al., 1998). Prior to Green's engagement with this issue,

the dominant line of thought was that prejudice and its behavioral manifestations increased during difficult economic times. Hovland and Sears' (1940) study of lynching from 1882 to 1930 in the American South found that lynching increased as the price of cotton decreased, implying that economic downturns translate into frustration, and frustration into aggression. This finding was replicated with better data more than a half-century later in a methodical analysis of lynching in 10 Southern states by Tolnay and Beck (1995). Given the conceptual overlap between hate crime and lynching (King, Messner, & Baller, 2009), it was reasonable to assume a comparable relationship between hate crime and unemployment. However, the economy–lynching correlation now appears tenuous. When Green, Glaser, and Rich (1998) reexamined the lynching data and made slight changes to the modeling and duration of the time series, the statistical association between macro-economic conditions and lynching failed to hold up. If a poor economy caused frustration, which in turn caused aggression, then racially motivated violence should have spiked during the Great Depression, but lynching never returned to earlier levels. Green and colleagues also looked at monthly unemployment data for New York City in the late 1980s and early 1990s, and found no correlation between changes in unemployment and hate crime. Two additional studies of hate crime at the neighborhood level—one using data from New York City (Green, Strolovitch, & Wong, 1998) and another from Chicago (Lyons, 2007)—also show remarkable consistency with respect to demographics and economic conditions. Neither study finds that hate crimes are more prevalent in economically depressed areas. In Lyons' (2007) Chicago data, some models even show that "antiblack incidents are … *more* common in economically affluent communities" (p. 847, emphasis added). This conclusion from a US setting is congruent with research from Germany, where economic conditions do not appear to affect right-wing violence after controlling for other relevant variables (e.g., number of foreigners; see Krueger & Pischke, 1997; McLaren, 1999; see also King & Brustein, 2006, for related historical arguments).

The absence of a strong correlation between economic conditions and hate crime is broadly consistent with what research finds for terrorism. Mindful that terrorism research focuses on larger geographic units (nations rather than neighborhoods), the general conclusion is that terrorists do not disproportionately originate from or perpetrate attacks in countries with low GDPs. A minority body of research does support the assertion that poverty is an underlying cause of terrorist radicalization. One such work is Freytag et al. (2011), who conclude that poor socioeconomic development at the country level is conducive to the occurrence of terrorist incidents. On the other hand, Krueger and Laitin (2008) find that terrorists are no more likely to come from countries with poor economies as measured by GDP. Gassebner and Luechinger (2011) likewise find no significant relationship between terrorism and GDP, and go on to conclude that any socioeconomic effects on terrorism must be small. Krueger and Malečková (2003) similarly find weak evidence for a poverty–terrorism nexus. Neither does Abadie (2006) find any effect of income on the frequency of terrorist attacks once country characteristics are controlled for, while Piazza (2006) cannot detect a significant relationship between terrorism and a wide variety of economic measures.

But if the economy fails to predict terrorism or hate crime with any consistency, what does matter? In a word: *turf*. If we know whether more than one group lays claim to the same area, we can better understand both hate crime and terrorism. We mentioned two studies of hate crime in Chicago and New York neighborhoods earlier, neither of which supported economic explanations of hate crime. However, each study makes a compelling case for the importance of demographic change. Green, Strolovitch, and Wong (1998)

examined racially motivated crimes in New York City between 1987 and 1995. They found that hate crimes perpetrated by whites against three minority groups—blacks, Latinos, and Asians—occurred most frequently in predominantly white neighborhoods that had recently experienced minority in-migration. For instance, the prototypical neighborhood for anti-Asian hate crimes would be a place that was 95% white in 1980 but experienced a 5% loss of the white population and a 5% increase in the Asian population by 1990. More recently, Lyons (2007, 2008) analyzed hate crimes reported to the Chicago Police Department to assess neighborhood variation in anti-white and anti-black hate crimes. A novelty of Lyons' work is his attention to community social cohesion and informal social control. Using methods similar to Green and colleagues (1998), Lyons found that anti-black hate crimes were more prevalent in white neighborhoods with high levels of informal social control that had experienced an influx of blacks in recent years. He concluded that "anti-black hate crimes are most numerous in relatively organized communities with *higher* levels of informal social control, and *especially* in internally organized white communities under-going the threat of racial invasion" (2007, p. 847, emphasis in the original). In each study, the authors view hate crime as defensive posturing ignited by an out-group establishing residency on turf that had long been occupied by a single racial group.

This emphasis on geography, identity, and new groups moving to historically homoge-neous areas also helps us understand terrorism, although the research here is not as systematic as what we find for hate crime. In our view, this perspective is particularly useful for making sense of acts of terrorist campaigns carried out in the name of populations subject either to extensive colonization or subordination within their own social context (e.g. Catholics in Northern Ireland, Basques in Spain, indigenous Algerians during French colonial rule), but it also works well for making sense of less archetypical cases, such as the al-Qaeda campaign against the United States. The conventional wisdom in late 2001 was that al-Qaeda had attacked the United States on September 11 because its members hated American values and freedom. In his September 20, 2001, speech to a joint session of Congress, President George W. Bush asked rhetorically—"Why do they hate us?" His answer: "They hate what they see right here in this chamber: a democratically elected government. Their leaders are self-appointed. They hate our freedoms: our freedom of religion, our freedom of speech, our freedom to vote and assemble and disagree with each other" (*Washington Post*, 2001).

We do not question that many terrorists detest pluralism and freedom of religion, but if that were al-Qaeda's true motivation, then the United States would have been attacked long ago and Sweden would have been attacked as well (Lawrence, 2005, pp. 238–239; Pape, 2003). The motivation was more about turf and the presence of US troops in Muslim lands than any concerns about freedom and democracy (Scheuer, 2004). With the permission of the Saudi government, the United States placed troops in Saudi Arabia during and after the 1991 Gulf War. This was seen by bin Laden and his followers as an affront to Islam, and bin Laden later issued a *fatwah* regarding American troops in Saudi Arabia. Indeed, the bomb-ings of US embassies in Kenya and Tanzania in 1998 occurred on the eighth anniversary of American troops arriving on Saudi soil.

The case of al-Qaeda is somewhat atypical. Although it has a definite territorial compo-nent, the Arabian Peninsula was never truly under US occupation, nor were the Saudis directly subject to American control in their own country, and yet the symbolism of the foreign military presence was still sufficient to ignite an international terrorist campaign. In our view, if the turf perspective helps make sense of the al-Qaeda case, then it is likely of equal or greater use when analyzing terrorist campaigns that are inherently territorial. For example, the situations in Israel and Palestine, Northern Ireland, and Kashmir have at times

generated substantial numbers of terrorist attacks, and each has the common denominator of multiple nationalities and religions claiming the same turf. The hate crime research on contested turf is further developed, both theoretically and empirically, than the comparable work on terrorism, and we think this is a potential area in which one body of work can inform the other.

Pathways Connecting Terrorism and Hate Crime

To this point, our discussion of hate crime and terrorism has focused on their shared and unique correlates. Our reading of the respective literatures is that enough conceptual overlap exists to speak about terrorism and hate crime in the same conversation, although pronounced differences exist for units of analysis, nature of data, importance of violence, demographic profiles, and contextual correlates. To reiterate a point made earlier, we see the two as comparable insofar as they are crimes motivated by hatred of a group or culture, but they are not close cousins. Here, we consider other ways in which hate crime and terrorism might be related. Instead of asking whether they are different ends of the same continuum, we might instead ask whether they are correlated with each other, and, if so, if any correlation between them is causal. For instance, we could think of hate crime against racial or religious minorities in the United States as constituting a "poor man's terrorist attack." It could also serve as a warning that, in the future, more serious terrorism by right-wing groups is imminent. In this case, hate crime would precede and predict terrorism in the same way that tremors precede earthquakes. Alternatively, we could ask whether terrorist attacks stir up a sense of vengeance in a population that manifests in various ways, including as hate crime.

Sociological work on conflict management (Black, 1993) and violence (Phillips, 2003; Papachristos, 2009) suggests that many crimes are acts of vengeance, often carried out in retaliation for a previous grievance. Viewed from this angle, terrorism could precede and predict hate crimes. For example, there were over 1,000 hate crimes with an anti-Muslim or anti-Arab motive recorded during the first 2 weeks after September 11, 2001; by comparison, fewer than 300 hate crimes with these motivations were reported to the FBI in the preceding 8 months (Disha, Cavendish, & King, 2011; see Figure 25.1). Whether we can generalize
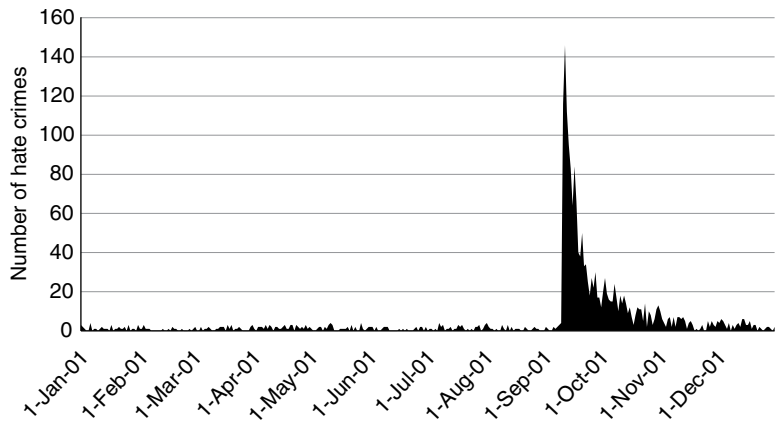
Figure 25.1   Hate Crimes against Arabs and Muslims in the United States by Day, 2001
Source: FBI, Uniform Crime Reports, 2001, and Disha et al. (2011)

from the most lethal terrorist attack in US history remains an open question, and the purported cause-and-effect associations need some theoretical context.

Deloughery, King, and Asal (2012) develop two competing theses about the temporal patterning of hate crime and terrorism. On the one hand, and as discussed in the preceding paragraph, the frequency of hate crime may serve as a precursor to more extreme and potentially violent terrorist activity. Citing work on radicalization—defined as changes in belief, feeling, or behavior toward increased support for intergroup conflict (McCauley & Moskalenko, 2008)—Deloughery and colleagues investigate whether terrorist attacks, particularly those evidencing a right-wing motivation, act as an indicator of right-wing radicalization and thereby serve as a prologue to more violent and expressive forms of right-wing terrorism. This hypothesis is exploratory and builds on Turk's (2004) speculation that "once underway, campaigns of terrorism and related political violence tend to gain momentum" (p. 279). They also build on Hamm's (1997) discussion of the Oklahoma City bombing in 1995. In the years leading up to the bombing, Timothy McVeigh increasingly read the work of white separatist leader William Luther Pierce about "how brave heroes resist the imminent threat to the white race and America posed by Jews, blacks, and other minorities" (Turk, 2004, p. 279). He frequently attended gun shows, distributed copies of *The Turner Diaries*, increasingly talked about conspiracy theories, and obsessed over issues that stoked right-wing anger toward the federal government, such as Waco and Ruby Ridge. The bombing might be viewed as the culmination of McVeigh's radicalization process in which right-wing sympathies were followed by non-violent crime (methamphetamine use), which intensified into a large-scale lethal attack. Deloughery and colleagues acknowledge that the McVeigh case is selective and not generalizable on its own, but it can be useful for developing hypotheses when macro-level empirical work is scant. The Oklahoma City case is suggestive of a graduation from low-level actions to fatal terrorism at the micro-level, and an analog at the macro-level is that hate speech and perhaps hate crimes against minorities could signal that right-wing groups are increasingly expressing grievances and may upgrade to more lethal actions. However, when Deloughery and colleagues examined terrorist attacks and hate crimes by week for the period 1992–2008, they found no correlation between hate crimes and subsequent levels of terrorism. This null finding did not change, regardless of the number of lags in the model or the type of hate crime or terrorism in question.

However, the results are entirely different when they put terrorism on the other side of the equation. That is, statistical models suggest that terrorism predicted hate crime, albeit with some scope conditions attached. Deloughery and colleagues found that hate crimes against minority groups increase—sometimes quite dramatically—following lethal attacks by foreign groups. Two subsequent studies replicate this basic finding. Hanes and Machin (2014) investigate racially motivated crimes in England following the July 7, 2005, bombings of the London Underground in which Islamic terrorists killed more than 50 British civilians. They reported a 27% increase in crimes against Asians and Arabs during the month following the 7/7 attacks. The frequency of such anti-Asian and anti-Arab attacks dissipated over time but remained above pre-bombing levels for nearly a year. King and Sutton (2013) reached the same conclusion in their research on hate crimes against Arabs and Muslims in the United States. They demonstrate that hate crimes cluster in time, and these clusters follow antecedent events that result in one group harboring a grievance against another. For instance, they show that anti-black hate crimes increased following the acquittal of African American football star O. J. Simpson, who was accused of slaying two white victims. They also look at the consequences of terrorist attacks that satisfy three

conditions: the attack was lethal, occurred on US soil, and Arab or Muslim groups were suspected in the immediate aftermath. This latter point is paramount and calls attention to the important role of the media. For example, the *New York Times* and CNN ran stories about the possible involvement of Islamic fundamentalists shortly after the Oklahoma City bombing in 1995. King and Sutton (2013) show that anti-Arab and anti-Muslim hate crimes increased immediately thereafter, then quickly subsided when blame for the attack was directed elsewhere. Likewise, a survey of major media outlets following the Boston Marathon bombing suggests that hate crimes against innocent Muslims occurred within a day of the attack (Stephens & Jouvenal, 2013).

The pattern of hate crimes following terrorism is evident, but what is the mechanism connecting the two? Two explanations—one purely sociological and the other originating in psychology—provide insight as to why innocent civilians are targeted after incidents of terrorism. On the sociological side is Donald Black (1983), who observed that much illegal behavior is a moralistic pursuit of justice; crime is often an act of retribution or an expression of a grievance by unilateral aggression. In short, much crime is simply people taking the law into their own hands when they cannot go to the police. Black discusses the history of violence of this sort and the role of the state in curtailing it, but the key point for the present argument is that crime is often a reaction to a grievance or feeling of victimization. Terrorism perpetrated by foreigners serves as a triggering event that leaves the native group with a grievance and fuels a desire for retribution. Consequently, prejudice (sometimes coupled with violence) against those who look like the assailants is likely to increase.

On the psychological side, Lickel and colleagues refer to this phenomenon as *vicarious retribution*—"aggression toward members of an out-group for an assault or provocation that had no personal consequences for him or her, but did harm a fellow in-group member" (Lickel, Miller, Stenstrom, Denson, & Schmader, 2006, pp. 372–373). For instance, the 7/7 bombings in London were a triggering event that incited anger and a desire for retribution among much of the British population, much like 9/11 did in America. Retribution against the perpetrators is difficult in many cases—impossible in suicide attacks—and hence vicarious retribution against those who *look like* the perpetrators is increasingly likely.

Conclusion

Our objective in this chapter has been to review research on hate crime and terrorism and to assess whether prior theory and empirical work give us reason to treat these as analogous behaviors. We close with three conclusions and a call for further research on specific themes. First, hate crime and terrorism are similar when considered at a high level of abstraction. If we merely considered the general characteristics of the offenses—crimes that express social or political grievances, often with animus toward the target group—then hate crime and terrorism certainly belong in the same conversation. Sometimes specific crimes even get tallied in both columns. However, when we pick apart the demographic correlates, closely examine the definitional properties, and consider the lethality and motivations of the two crimes, stark differences between the behaviors emerge. This set of similarities and differences is summarized in Table 25.1.

Our second conclusion is that research on terrorism offers few insights relevant to the study of hate crime, and vice versa. This could change as new research becomes available,

but at present there is little reason to think that knowledge of hate crime can be seamlessly imported to the study of terrorism.

Finally, research demonstrates at least one specific way in which terrorism and hate crime are theoretically and statistically associated. Terrorist attacks by minority or foreign groups can supply the emotional energy and motivation for retaliatory hate crimes against innocent third parties who resemble the perpetrators. Examples include the 9/11 attacks in the United States, the London Underground bombings in 2005, and the *Charlie Hebdo* shooting in Paris (Scheller & Diehm, 2015); each was followed by attacks on Muslims and Arabs not associated with the attackers.

We offer these conclusions while mindful of some important gaps in the research. For one, hate crimes are a moving target, since countries define and record them differently. Perhaps a study focusing narrowly on *violent* hate crime would reveal more common ground with terrorism, but that remains an empirical question. On this note, an analysis of how different countries go about collecting hate crime data would be invaluable to scholars with an interest in the topic. Also, our review of terrorism was dominated by terrorist attacks in which an organized group played a role in the offense. But what of the lone wolves? Are terrorist attacks perpetrated by individuals acting on their own volition more akin to hate crimes? Deloughery, King, and Asal (2012) compare group-based terrorism, lone-actor terrorism, and violent hate crime, and conclude that lone-actor terrorism shares more common ground with hate crime than group-based terrorism, but many differences are still evident. Finally, we call for more research on the role of contested turf in the study of terrorism. We see this as a viable research area in which the hate crime literature provides a set of findings that could help explain where terrorism is likely to escalate. Perhaps research of that nature could help draw meaningful connections between the two types of crime, but in the absence of more theoretical or empirical overlap we think hate crime and terrorism remain comparable only at a broad conceptual level.

Notes

1   Our hypothetical is grounded in reality. The notion that terrorism thrives where economies struggle has been proffered by leaders of the World Bank and heads of state, including George W. Bush and Tony Blair (see Krueger, 2007, pp. 12–13).

2   We are mindful that definitions of each behavior vary. The US Department of State's definition of terrorism differs slightly from that used for classification in GTD, which differs from definitions used by various authors on the topic, and this is without even considering the more normative issues related to terrorism (recall the adage that "one man's terrorist is another man's freedom fighter"). The same can be said for hate crime. For instance, the FBI's data collection definition differs from the behavior described in some state laws and with definitions used by hate crime scholars (e.g., Perry, 2001).

3   Laws in countries such as Germany, which prohibits the display of Nazi propaganda, are a notable exception, as these clearly relate to politics as well as prejudice.

4   One recent study using data on Far Right homicide offenders in the United States shows high rates of unemployment for this group (both "lone wolves" and members of groups; see Gruenewald, Chermak, & Freilich, 2013). To the extent that these are truly terrorists and not serious hate crime offenders, and also assuming that the high unemployment is indicative of low education levels, these data may challenge our suggestion that terrorists are, on average, reasonably well educated.

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Studying Extremist Homicide in the United States

Jeff Gruenewald and Brent R. Klein

Introduction

Since the 9/11 terrorist attacks,[1] increased academic interest and funding opportunities have revolutionized criminological research on terrorism. One aspect of this emerging literature has been an effort to better understand the nature of extremist homicide, or deadly acts of ideologically motivated violence committed by adherents of extremist movements. Extremist homicides in the United States include both *politically motivated* attacks against government and military actors, businesspersons, and civilian targets, and *socially motivated* attacks against members of social minority groups. Despite some recent advances in this area (e.g., Gruenewald, 2011; Gruenewald & Pridemore, 2012), empirical studies addressing this topic remain few. This gap in the research is curious, as politically and socially motivated bombings and shootings are the types of violence most likely to capture the attention of media, policymakers, and the general public. This scarcity of research is also surprising as criminology has an established tradition of comparative homicide research that has, until recently, ignored homicide categories defined by ideological motives and offenders' extremist affiliations.

Just as terrorism studies has much to gain from a crime perspective more generally (LaFree & Dugan, 2004), we believe that a comparative crime approach can help us better understand the nature of politically and socially motivated homicide. In this chapter, we take stock of existing studies on extremist homicide and suggest future directions for this line of research. We begin by addressing several definitional and methodological problems that have stunted comparative research on extremist homicides, and how criminologists have overcome some of these obstacles by relying on alternative, open-source databases. Our focus is primarily on homicides perpetrated by members and affiliates of the extreme Far Right and al-Qaeda and associated movements (AQAM), who have been responsible for the majority of violent incidents resulting in fatalities in the United States over the past 30 years. Next, we review findings from previous studies on extremist homicides, and the situational and community contexts in which these violent acts have occurred. We end by

proposing several recommendations for the application of alternative conceptual schemas, theoretical perspectives, and methodological approaches to the study of extremist homicide.

Comparative Homicide Research

If we hope to understand the complexities of extremist homicide, we must appreciate its heterogeneous nature. Criminologists have long recognized the importance of categorizing criminal behaviors into meaningful types (Dabney, 2004), and it is generally recognized that important differences exist in the nature of violent, property, financial, and other forms of criminal behavior. Others have considered varying forms of homicide more narrowly (Flewelling & William, 1999). This research suggests that comparatively analyzing different types of homicide can increase our understanding of its varied nature, and demonstrates how different types of homicide have unique patterns, explanations, and situational contexts (Decker, 1993; Flewelling & Williams, 1999; Pizarro, 2008). Developing meaningful categorization schemes can therefore reduce our tendency to over-generalize the effects of individual, situational, and broader social mechanisms to all forms of homicide. Without a clear understanding of the nuanced causes and correlates of homicide, we risk developing criminal justice and community-based responses grounded in misinformed policies, programs, and practices (Flewelling & Williams, 1999; Maxfield, 1989).

Social scientists have long recognized the need for comparative homicide research, stemming back to the turn of the nineteenth century. For example, journalist and author Horace V. Redfield (1880) used newspaper and magazine clippings to comparatively examine homicides occurring in the northern and southern regions of the United States. Émile Durkheim also commented on the importance of conducting empirical social research from a comparative perspective, suggesting that, similar to suicide, homicide was not a single "criminological entity" (Durkheim, 1897/1951, p. 358). Modern comparative homicide research is most indebted to the work of Marvin Wolfgang, an influential criminologist who analyzed police files on over 500 Philadelphia killings between 1948 and 1952 (Wolfgang, 1958). His research uncovered key differences in types of homicide, specifically bringing attention to distinctions between homicide that involved victim involvement (or victim-precipitated homicide) and stranger homicide.

Many criminologists have since studied homicide from a comparative perspective, both at the incident and aggregate levels, utilizing several different categorization schemes. Categorizing homicides by variations in victim–offender relationships and motivational circumstances has been the most common approach (Flewelling & Williams, 1999). For instance, motivational circumstances have been conceptualized as consisting of two general homicide types, including premeditated, instrumental attacks against strangers, and spontaneous, expressive homicides usually between family, friends, and others who are known to one another (Block, 1981; Block & Block, 1992; Riedel, 1987). Other scholars, however, have found that some forms of "deviant homicides" fail to follow "normal violence" scripts, suggesting that instrumental homicides occur between acquaintances and expressive homicides occur between strangers (Decker, 1996; Varano & Cancino, 2001).[2] Comparative studies have categorized homicide incidents based on specific offender characteristics, such as gang affiliations. In one study, Maxson, Gordon, and Klein (1985) used information from local police files to comparatively examine situational characteristics of gang and non-gang-affiliated homicides, finding marked differences in weapon use and

homicide locations. More recent studies by Decker and Curry (2002) and Pizarro and McGloin (2006) have supported previous research by showing how gang and non-gang-affiliated homicides vary across several situational and other incident-level variables.

Aggregate-level studies have also comparatively examined categories of homicide across US states, counties, and cities based on social data from the US Census Bureau and crime data from official homicide statistics and municipal police departments. In one of the first studies of this type, Smith and Parker (1980) found that the effects of social structural variables (e.g., poverty) on rates of homicide were dependent upon whether the focus was on interpersonal homicides between those known to one another (primary homicides) or instrumental attacks against strangers (non-primary homicides). Failing to find regional differences in homicide rates, net the effects of other structural variables, their results were generally unsupportive of the southern subculture of violence perspective. Findings from another study using national homicide statistics and US Census data partially contradicted Smith and Parker's conclusions, suggesting that, while social disintegration had universal effects on homicide rates, indicators of a southern violent subculture were confined to homicides stemming from interpersonal conflicts (Williams & Flewelling, 1988).[3]

Despite advances in our understanding of homicide "syndromes," there is currently no "Holy Grail" for classifying homicides into useful types (Flewelling & Williams, 1999). All homicide categories overlap in ways that mask potentially meaningful differences (Loftin, Kindley, Norris, & Wiersema, 1987), and some homicides will not fit neatly within categories (Decker, 1996). We believe, however, that it is important to continue applying existing and new categorization schemas to extremist homicide and other forms of deviant homicide. Only recently have scholars begun to systematically compare and uncover the heterogeneous nature of extremist homicides across offender, motive, victim, and regional categories (e.g., Adamczyk et al., 2014; Chermak & Gruenewald, 2015; Gruenewald & Pridemore, 2012; Parkin & Freilich, 2015). Several important implications stem from the findings of this emerging research. First, it cannot be assumed that the correlates and patterns of average or non-ideological homicide can be generalized to extremist homicide. For example, extremist homicides involving expressive forms of violence against strangers may be the norm rather than the exception. Second, coming to more nuanced understandings of the etiology of violent extremism requires recognition of similarities and differences in extremist violence types. Just as crime theories cannot be universally applied to all forms of crime, we must avoid indiscriminately applying crime theory to varying forms of extremist homicide. Finally, those seeking to develop criminal justice policies and programs to combat extremist violence must consider the heterogeneous nature of extremist homicide before reallocating resources or implementing new practices.

In the next section, we address several conceptual and methodological issues that have created obstacles to studying politically and socially motivated homicide. We then highlight recent advances in the study of extremist homicide that have allowed us to overcome some of these impediments to conducting empirical research on extremist homicide.

Conceptualizing Extremist Homicide

Conceptual ambiguity remains as to what types of deadly violence should be considered extremist homicide. The problem of failing to arrive at a consensus definition of ideologically motivated crime has historically been a problem for terrorism scholars (Silke, 1996; Weinberg, Pedahzur, & Hirsch-Hoefler, 2004). Scholars studying extremist homicides

against social minorities also face issues of multiple definitions of "hate" or "bias crime." Because terrorism and bias crime are social constructions, historical and social forces shape their meanings. While the FBI and Congress have formulated definitions of both types of violence,[4] questions remain about what specific types of violence are included in these official distinctions. Moreover, official definitions may be relied upon heavily by law enforcement, but most scholars studying terrorist and extremist violence rely on their own definitions. In one oft-cited overview of terrorism research, Schmid and Jongman (1988) surveyed persons studying political violence and uncovered over 100 definitions of terrorism. Since this study was published, we have yet to come to a consensus definition of terrorism.

The public's understanding of bias crime and terrorism has been heavily influenced by high-profile acts of violence, emotive public reaction, and reactive policy changes. For instance, our understanding of terrorism was abruptly altered in 1995 when it became clear that a pair of ex-military, white Americans were responsible for killing 168 people in the bombing of the Alfred P. Murrah federal building in Oklahoma City. Terrorism was no longer solely a foreign issue, and international terrorists were not the only threat to homeland security. It also became clear that terrorists no longer were operating in organized groups with formal command and control structures. A later string of terrorist attacks against abortion providers, gay nightclubs, and Atlanta's Centennial Olympic Park in 1996 by Eric Rudolph further demonstrated that lone actors and offenders motivated by animus toward social minority groups could be labeled as terrorists. During the 1990s, there were also several high-profile bias-motivated attacks against social minorities, some of which were committed by white supremacists affiliated with racist skinhead groups. Other attacks were committed by white supremacists with no affiliations to extremist groups. Two of the most infamous bias homicides are the anti-gay killing of Wyoming college student Matthew Shepard and the racist dragging death of James Byrd, Jr. While most people would consider the anti-gay killing of Shepard a bias-motivated homicide, the offenders did not face legal hate crime charges. Also, while the two killers in the Byrd, Jr., case were allegedly affiliated with hate groups and sought to ignite a race war, they also did not face hate crime or terrorism charges.[5] In short, we can see that by focusing on some of the most infamous cases of terrorism and bias crime, several similarities, differences, and contradictions in the classification of ideologically motivated homicide emerge. In some cases, offenders acted alone, while other offenders operated in small groups. Only two of the offenders described earlier were driven by a desire to further formal group interests. These crimes were also not consistently prosecuted or labeled as bias crimes or acts of terrorism by law enforcement, in some cases because such laws did not exist in these jurisdictions. Extending this discussion in the following text, we address in more depth three conceptual ambiguities and dilemmas that continue to plague the study of politically and socially motivated violence.

First, differentiating between forms of extremist homicide by the ultimate goals of extremist offenders, such as retaliation against social minority groups or promoting social change, remains problematic. Consider that some offenders may have multiple motives, simultaneously using violence to retaliate against US military intervention, promote acceptance of Sharia law, and evoke fear from the public. It is also possible that offenders have both social and political motives, using violence as both a means to retaliate against specific groups (or individuals) and to promote social change. While the messages of bias offenders may be directed at representatives of specific population segments, fear and outrage by the broader public often follow. Just like terrorists, bias homicide offenders send messages by committing symbolic acts of lethal violence, though specifically against

representatives of racial and ethnic, religious, sexual orientation and gender identity, and other social minority communities.

Second, conceptually distinguishing extremist homicide from traditional homicide also poses challenges. Schmid (2004) suggested that terrorist motives can be mixed, both criminal and political, making it difficult to distinguish between terroristic and routine criminal acts (see also LaFree & Dugan, 2004). Also consider Berk, Boyd, and Hamner's (1994) informative discussion of *symbolic* and *actuarial* bias crime. Actuarial bias-motivated crimes are those that are motivated not solely by bias or hatred toward social minority groups, but by other instrumental motives (e.g., robbery) as well. Symbolic bias crimes, in contrast, are those that are motivated solely by a perpetrator's ideology and targeting of social minority groups. Distinguishing between these types of violence can be challenging for law enforcement in ways that manifest in official bias crime data.

Third, categorizing extremist homicides by group affiliations is also problematic, as many offenders are not formally (or informally) associated with extremist groups. In their pioneering book on bias crime in the United States, Jack Levin and Jack McDevitt (1993) found that few bias crimes were committed by ideologically driven members of formal hate groups. Politically and socially motivated offenders following a leaderless resistance philosophy have also increasingly chosen to act on their own volition to avoid detection and infiltration by law enforcement (Beam, 1992; Hewitt, 2003; Kaplan, 1997; Michael, 2012; Pantucci, 2011; Spaaij, 2010). Importantly, it was not until the late 1990s that the FBI began to classify crimes perpetrated by lone wolves as terrorism, and some terrorism scholars have questioned the classification of lone-wolf attacks as terrorism (Hoffman, 1998; White, 2003). How to best distinguish between the spree killings of terrorists and other types of lone actors has yet to be settled.

Establishing the nature of offenders' associations to extremist groups can also pose real challenges. In some instances, lone actors may plan, prepare, and execute violent attacks alone or in small cells wholly outside of the influence of formalized extremist groups, while other extremists maintain nominal associations with such groups. For example, while Oklahoma City bomber Timothy McVeigh attended a couple of paramilitary group meetings prior to the 1995 bombing, it would be questionable to label him a militia group member or affiliate. In contrast, some extremist offenders may actually belong to multiple groups either concurrently or consecutively. Extremists may leave one group to join another, or may belong to a group that subsequently grows into a larger organization or morphs into a smaller splinter group.

Extremist Homicide Data

The empirical study of homicide in the United States has been advanced for the better part of the last century in large part because of the availability of national crime statistics. One of the most commonly used homicide data sources is the Uniform Crime Reports' (UCR) Supplementary Homicide Report (SHR), which provide national crime statistics published annually by the FBI, based on information provided to them by local police agencies. For decades, SHR data have provided event-based information on offender, victim, and situational characteristics of homicide events. Unfortunately, the SHR and other national crime data sources do not include information that would be useful for the study of politically motivated homicide, such as information on group affiliations or political motivations of offenders. On the other hand, we have witnessed an increase in the quantity and quality of official data

on violence perpetrated against social minority groups (Nolan, Akiyama, & Berhanu, 2002; Strom, 2001).[6] Bias crime data voluntarily sent to the FBI from local police agencies are published annually and made available to researchers through the UCR's Hate Crime Statistics and National Incident-Based Reporting System (NIBRS) programs. Unfortunately, the inclusiveness of these data remains limited by non-reporting and under-reporting of jurisdictions across the country (McDevitt, Balboni, Bennett, et al., 2000). Also, these data provide only a small number of variables that can be analyzed by bias crime researchers.

Previous research has explored why police organizations often undercount extremist violence against social minorities (Boyd, Berk, & Hamner, 1996; Haider-Markel, 2002). Studies show that police agencies vary in their organizational capacity to devote special attention to investigating and recording bias crimes (McDevitt et al., 2000). Some police organizations have no way to report this form of crime, or have ambiguous policies on the investigation of bias crime (Berk et al., 1994), while other agencies have a concrete system for reporting bias crime. Police agencies also vary in the extent to which they adopt definitions of bias crime and enforce bias crime policies (Grattet & Jenness, 2001), which depends in part on the local sociopolitical contexts in which agencies operate (Hamm, 1998).

Considering these conceptual and methodological issues, it is clear that alternative data sources are needed to further our understanding of extremist homicide. Fortunately, criminologists have made significant advances in the creation of alternative databases using open-source materials, such as court documents, advocacy group reports, and journalistic accounts. These sources have made it possible to collect and analyze data on topics such as extremist homicide, for which there is little or no available empirical data. One open-source database used by terrorism researchers is known as the American Terrorism Study (ATS), which primarily relies on federal court documents to collect information on terrorism cases investigated by the FBI.[7] Because most extremist homicides are not investigated by the FBI or adjudicated in a federal court, it is unfortunately not possible to attain a comprehensive record of extremist homicide from the ATS. Another prominent open-source database known as the Global Terrorism Database (GTD) collects information on domestic and international terrorism cases from media documents (LaFree & Dugan, 2007).[8] Again, many extremist homicides are not included in the GTD, possibly because attacks targeting social minorities are not identifiable through searches of media records, or because homicides are not considered terrorism-related by the GTD.

The open-source database known as the United States Extremist Crime Database (ECDB) also collects information on incident-, victim-, and offender-level extremist crimes spanning several extremist movements (i.e., Far Right, eco-terrorism, and radical Islamic) and crime types (i.e., violent, financial, and property crimes) (Freilich, Chermak, Belli, Gruenewald, & Parkin, 2014).[9] Similar to other open-source terrorism databases, the ECDB serves as an alternative to official crime data on ideologically motivated crimes. One unique feature of the ECDB is that it does not rely on the FBI or other official sources to determine if a crime should be classified as an act of terrorism or a bias crime. Instead, all illegal violent and financial crimes committed inside the United States by one or more offenders who subscribe to an extreme Far Right, radical Islamic, or extreme animal or environmental rights belief system are included. These inclusion criteria ensure that important cases of lone-wolf and state-level extremist homicides are included. A second unique feature of the ECDB is that all homicides committed by offenders associated with extremist movements are included, regardless of offenders' motivations. As a result, the ECDB currently maintains the most complete record of extremist homicide in the United States. The inclusiveness of these data also facilitates more nuanced comparisons of offender types,

such as by group or movement affiliations, and motivational circumstances, which have been shown to be important in prior comparative studies of homicide.

Comparative Research on Extremist Homicide

The availability of alternative, open-source terrorism and extremism databases has fueled scholarship on the criminal activities of extremists operating in the United States over the past several years. In one of the first empirical studies to systematically examine American terrorism from a criminological perspective, Smith (1994) used data from the American Terrorism Study to examine bombings, arsons, high-profile armored car robbery–homicides, and an assortment of other non-violent crimes (e.g., fraud, money laundering, etc.) committed by left-wing radicals and violent Far Rightists.[10] While much of the relevant literature since has not empirically examined deadly violence specifically, or has focused primarily on high-profile acts of terrorism, several more recent studies of extremist violence have begun to uncover some distinct offender and situational patterns of extremist homicide in the United States (Chermak & Gruenewald, 2015; Gruenewald, 2011; Gruenewald & Pridemore, 2012; Gruenewald, Freilich, Chermak, & Parkin, 2014). In this section, we focus our attention primarily on this small but growing area of research on incident and aggregate-level characteristics of homicides committed by extremists in the United States. Furthermore, we focus our review in the following text on the lethal violence of the two most violent domestic terrorist movements currently active in the United States—violent Far Right extremists and members of al-Qaeda and associated movements (AQAM).

Far Right Homicide

The key distinguishing feature of Far Right homicide as a separate subtype of homicide is the offenders' affiliations to the extreme Far Right movement and ideology.[11] Extremists responsible for committing homicides have adhered to an assortment of beliefs and group affiliations, and have involved members of the Ku Klux Klan (KKK) and other white supremacist groups (Arena & Arrigo, 2000; Bushart, Craig, & Barnes, 1998; Flint, 2001; Hewitt, 2000; Sprinzak, 1995), as well as the violent, prison-based organization known as the Aryan Brotherhood (Fleisher & Decker, 2001; Irwin, 1980; Orlando-Morningstar, 1997; Pelz, Marquart, & Pelz, 1991). Other homicidal members of the Christian Identity movement have been motivated by racist, religious beliefs (Arena & Arrigo, 2000; Barkun, 1997; Hoffman, 1987, 1995; Kaplan, 1993; Sharpe, 2000; Smith, 1994). This particular conspiracy-based belief system has had a major impact on neo-Nazi/skinhead groups linked to extremist homicide (Ezekiel, 2002; Hamm, 1993; Whitsel, 2001), as well as anti-government militia and Christian patriot groups (Barkun, 1996; Durham, 1996; Levitas, 2002; Neiwert, 1999). Other Far Right killers have been more focused on a single social or political issue. For example, Far Rightists have assassinated abortion providers and clinic employees (Blanchard, 1996; Carlson, 1995; Grimes, Forest, Kirkman, & Radford 1991; Kaplan, 1996; King & Husting, 2003; Wilson & Lynxwiler, 1988). Members of the sovereign citizens movement who reject their US citizenship and responsibilities to pay taxes have also committed several high-profile deadly attacks against law enforcement (Anti-Defamation League, 2012; Federal Bureau of Investigation, 2011; Suttmoeller, Gruenewald, Chermak, & Freilich, 2013).

Far Right lone wolves have also been responsible for committing extremist homicides (Gruenewald, Chermak, & Freilich, 2013; Hewitt, 2003; Spaaij, 2010). Gruenewald et al. (2013), for example, found that Far Right lone wolves were involved in 47 homicide incidents between 1990 and 2010. Loner extremist offenders, or those who do not affiliate with other extremists, often exhibit mental health issues (Gill, Horgan, & Deckert, 2014; Gruenewald et al., 2013; Spaaij, 2010), but vary little from group-based actors in regard to other criminogenic characteristics, such as engaging in prior criminal behaviors and substance/alcohol abuse (Gruenewald et al., 2013).

Previous studies of Far Right homicide indicate that offenders significantly vary from other types of homicide perpetrators. Though routine homicide perpetrators are disproportionately young Black males with low educational attainment and employment status, Hamm's (1993) ethnographic research on the criminal and terroristic activities of the skinhead and neo-Nazis movements found that the members tended to be young, white, working-class males with little-to-no prior criminal record. Comparing Far Right homicide perpetrators to traditional homicide offenders, Gruenewald (2011)[12] found that offenders' ages more closely resembled those of traditional homicide offenders, though white males were disproportionately represented in comparison to routine homicide offenders (see also Gruenewald & Pridemore, 2012). At the aggregate level, Chermak and Gruenewald (2015) found that Far Rightists were significantly more likely to be male when compared with Far-Leftist terrorists,[13] and Far Right homicides were more likely to be perpetrated by young white males when compared with AQAM violence. Moreover, Far Rightists were more likely than other violent extremists to have a history of mental illness and prior arrests, suggesting that Far Right homicide perpetrators were not only different from routine homicide offenders, but also unique from those who perpetrated other forms of ideologically motivated violence.

Some situational characteristics of Far Right homicide have also been found to vary from other homicide types. For instance, studies have shown that, in comparison to more common forms of homicide, Far Right-perpetrated homicides are significantly more likely to be committed with knives, blunt objects, and other more intimate weaponry (Gruenewald, 2011; Gruenewald & Pridemore, 2012). This suggests that Far Right homicides are more expressive and sometimes more brutal than traditional homicides. Some of the most brutal attacks have been against homeless persons who are often forced to withstand beatings and stabbings prior to their deaths (see also Hamm, 1993, 1998).

The settings in which Far Right offenders live and commit homicide are also unique in key ways. For instance, many Far Right homicides occur outside and in public (Gruenewald, 2011), and are less likely to occur in private residences when compared with traditional homicide offenses (Parkin, Freilich, & Chermak, 2015). Far Right homicides were also found to be proportionately more likely to occur in western states and in nonmetropolitan areas (Gruenewald & Pridemore, 2012), suggesting that Far Right homicide offenders prefer to operate in relatively more rural settings. Previous research has also found that Far Right homicide offenders also tend to live in counties that are racially homogeneous, have lower crime rates, and have higher percentages of evangelical Protestants when compared with counties where other violent extremists live (Chermak & Gruenewald, 2015).

Al-Qaeda and Associated Movement (AQAM) Homicide

Though Far Rightists have committed the greatest number of homicide incidents (Freilich & Chermak, 2007; Gruenewald, Freilich, & Chermak, 2009; Hewitt, 2003), large-scale attacks by members of al-Qaeda and associated movements (AQAM) continue to pose a

significant threat to the United States (Bergen, Hoffman, & Tiedemann, 2011). Scholarly interest in AQAM violence has increased dramatically since the 9/11 terrorist attacks, but empirical studies of AQAM homicide are few. In this section, we review what is known about this form of violence, based on the little research that has become available.

As with Far Right homicides, deadly AQAM attacks are perpetrated by individuals who are affiliated with a radical set of ideological beliefs. Whereas Far Rightists commit both ideologically motivated and non-ideologically-motivated homicides, AQAM offenders are primarily driven by ideology (Chermak & Gruenewald, 2015). AQAM offenders believe that violent jihad, or the violent struggle in God's path, against nonbelievers is central to Islam. AQAM extremists believe that they have a moral obligation to target the West, and especially the United States, for their exploitation of Muslim countries and the perceived atrocities committed against Muslims around the world. They also believe that Americans and other Westerners seek to oppress Islamic teachings and promote values viewed as disgraceful to Islam, such as feminism, gayrights, and sexual permissiveness.

Most AQAM extremists adhering to these ideological beliefs avoid committing fatal attacks in small cells or organized groups. In fact, Chermak and Gruenewald (2015) found that AQAM homicides and plotted attacks were more likely to be perpetrated by lone actors when compared with other extremist movements. A recent report detailing AQAM homicides and plots found that lone actors have accounted for nearly 34% of all homicides and more than 50% of all failed or foiled AQAM plots between 1990 and 2013 (Gruenewald, Freilich, Chermak, & Parkin, 2014). In another study, Gill et al. (2014) compared the personal characteristics of lone actors by ideology and found several notable differences between AQAM loners and Far Right lone actors. Although their study focused on lone-acting terrorists operating both in the United States and Europe, the analysis revealed that AQAM loners were on average 10 years younger than Far Rightists, significantly more likely to hold a college degree, and significantly less likely to have prior arrests (Gill et al., 2014). Other studies have found that, similar to Far Rightists, many AQAM lone-acting offenders struggled with mental health issues (Gill et al., 2014; Hewitt, 2003; Spaaij, 2010), were socially isolated (Gill et al., 2014; Spaaij, 2010), and were inspired by a combination of personal and political motives (Spaaij, 2010).

Examining various types of AQAM extremists operating in the United States more broadly, Kurzman, Schanzer, and Moosa (2011) showed that Muslim–American terrorists tended to be young males in their twenties who largely identified as Arab–American, South Asian, white or black, and were either US citizens by birth or naturalized citizens (Kurzman et al., 2011). Extending this work, Chermak and Gruenewald (2015) found that AQAM perpetrators were significantly more likely to be non-white and older, but less likely to have a criminal past. Moreover, AQAM perpetrators were more likely to be married at the time of the offense, have prior military experience, and have a high school degree or some college education (Chermak & Gruenewald, 2015).

In a recent report for the National Consortium for the Study of Terrorism and Responses to Terrorism (START), a Department of Homeland Security Center of Excellence, researchers provided findings on several situational characteristics of AQAM homicides and violent plots in the United States. First, they found that AQAM homicides were primarily perpetrated using firearms, while failed and foiled plots typically involved bombs/explosives as the planned weapon type (Gruenewald et al., 2014). These preliminary results indicated that AQAM homicides were much less intimate than Far Right homicides, and that failed and foiled AQAM plots were usually intended to be mass casualty attacks. Second, this research also suggested that the geographic settings in which AQAM homicides occur

are unique from other forms of extremist violence. While AQAM homicides have been scattered across the United States, planned AQAM attacks have been concentrated in the Northeastern and Southern United States. This is in contrast to Far Right homicide, which has historically taken place in western states (Gruenewald & Pridemore, 2012). Finally, research has shown that, relative to Far Rightists, AQAM perpetrators who committed homicides or plotted attacks were more likely to reside in counties with higher percentages of foreign-born residents, a higher number of residents voting in the 2000 election, higher percentages of female-headed households, and in counties with higher crime rates (Chermak & Gruenewald, 2015). However, these AQAM offenders were less likely to live in counties with low inequality, residential mobility, and divorced residents when compared with other types of domestic extremists.

Future Directions for Extremist Homicide Research

Though in the last several years we have witnessed increases in empirical research on extremist homicide, there remains a need for further conceptual clarification, theoretical application, and innovations in selected research designs and methods. We begin to outline some directions for future research in this section and suggest that comparative research on extremist homicide can move forward by using categorization schemas utilized in previous research on traditional forms of homicide. For example, prior incident-level studies have found several important differences in gang-affiliated and non-gang-affiliated homicides (e.g., Maxson et al., 1985). Little is currently known, however, about how homicide offenders who belong to or affiliate with white supremacist, neo-Nazi, Patriot, and other Far Right and AQAM groups compare with those who do not. Both inter- and intra-extremist movement comparisons could shed light on important questions about how group membership influences lethal violence committed by domestic extremists. Extremist group categories could also be refined to account for differing movement and group structure types. Though prior studies have compared different Far Right lone-actor types (Gruenewald et al., 2013), such comparisons have yet to be made across extremist movements. Additional offender-based categorization schemes should also seek to capture possible similarities and differences in the criminal behaviors of extremist homicide offenders and domestic radicals, or those that belong to extremist movements that do not commit ideologically motivated homicides or other crimes. Identifying key differences in the characteristics of those who go on to commit ideologically motivated homicide compared with those who do not would be a monumental achievement, with implications for criminological theories of extremist violence and homeland security policy. Of course, methodological and ethical challenges remain for collecting comparable data on domestic radicals who have yet to commit crimes. Nonetheless, open-source databases such as the ECDB, ATS, and GTD are positioned to formulate creative data collection techniques, possibly by utilizing watchdog reports and movement publications for gathering information on domestic radicals.

In addition to offender-based categories, future extremist homicide research would benefit from examining different forms of motivational and situational circumstances. As discussed previously, several studies have found significant differences in expressive and instrumental homicides (Block & Block, 1992; Riedel, 1987; Decker, 1993). While we might expect extremist homicides to be expressive in nature, we also know that extremists commit non-ideologically-motivated crimes, such as drug-related, domestic homicides, and

intra-group conflict homicides. To date, we know little about how the predictors of these homicides compare with ideologically motivated homicides.

As discussed previously, a common approach of previous homicide studies has been to make regional comparisons in homicide occurrences, with some studies finding that regional (and subcultural) effects are dependent upon the types of homicides considered. Continuing this particular line of comparative research seems especially relevant to understanding how cultural differences might influence the likelihood and extent of extremist homicides across different segments of the US population. Moreover, cross-national comparisons have been a mainstay of previous homicide research (Koeppel, Rhineberger-Dunn, & Mack, 2015; LaFree, 1999). Securing and analyzing open-source or official data from other countries that have experienced similar types of violence from active extremist movements would allow us to identify similarities and differences in predictors of extremist homicide across countries of interest.

Several scholars have called for the application of crime theories to terrorism (Rosenfeld, 2002; LaFree & Dugan, 2004). We agree that research needs to move past descriptive accounts and toward the identification of causal mechanisms affecting extremist homicide outcomes. We also believe that information on criminal and non-criminal pre-incident activities of domestic extremists from open-source databases such as the ATS and ECDB can be helpful in this regard. Based on these data, for example, social learning theories could be applied to extremist homicide data to help us understand how exposures to positive definitions of extremist violence while attending demonstration events, visiting extremist Internet sites, or affiliating with extremist groups influenced extremist homicide outcomes. An analysis of open-source data could also illuminate specific types and levels of collective strains, or perceived grievances experienced by those belonging to domestic extremist movements that might lead some to commit ideologically motivated violence (Agnew, 2010). Masculinity theories of violence could also prove to be useful for understanding how situations escalate into fatal acts of extremist violence. A study by Kelley and Gruenewald (2015), for instance, found that Messerschmidt's (2012) notions of gender and sexuality challenges and the situated need to reaffirm or accomplish masculinity were beneficial for understanding the ways in which homicides targeting anti-lesbian, gay, bi-sexual, and transgender victims transpired. A similar perspective could also be applied to homicides committed by domestic extremists to understand how various social and situational challenges to sexual orientation and gender identity facilitate ideologically motivated violence.

The previously suggested conceptualizations and applications of crime theory to extremist homicide also necessitate research design and methodological innovations. With the increased availability of alternative data sources, there are opportunities to empirically address unanswered questions about the nature of extremist homicide. One way for this to happen is by integrating data from multiple sources. For example, it is now possible to make comparisons of suspect, victim, and situational characteristics across fatal and non-fatal extremist crimes by integrating homicide data from the ECDB and non-fatal crime data from the ATS and GTD. There are also opportunities to make cross-national comparisons by integrating ECDB domestic homicide data and the GTD's international homicide data. Those comparatively studying extremist homicide must also continue to look for meaningful comparison groups by way of other official and alternative crime and social data sources. Prior research has already successfully linked extremist homicide data with FBI homicide statistics, US Census data, and advocacy group data (Adamczyk, Gruenewald,

Chermak, & Freilich, 2014; Chermak & Gruenewald, 2015; Freilich, Adamczyk, Chermak, Boyd, & Parkin, 2014; Gruenewald, 2011; Gruenewald & Pridemore, 2012), but these studies represent only the tip of the iceberg on what kinds of comparative analyses are possible. It will also be important that alternative sources of extremist crime data continue to be maintained, updated, and expanded, so that we can track the dynamic and evolving nature of extremist violence. In addition to more funding, this will require the adoption of new technologies as they are developed, such as those facilitating automated open-source data collection. As extremist crime data become increasingly available to criminologists from varying theoretical orientations and methodological approaches, we should expect to come to a more nuanced understanding of extremist homicide as a heterogeneous social phenomenon.

Conclusion

We end by suggesting that conceptualizing extremist homicide as both politically and socially motivated attacks ending in victims' deaths is a productive way to advance our understanding of this complex form of lethal violence. Though historically examined separately, studying bias crime and political terrorism as variations of extremist homicide events will allow us to identify the similarities and differences in the most serious forms of ideologically motivated violence committed by the extreme Far Right and AQAM movements. Advancing our understanding of extremist homicide will continue to rely on open-source extremist crime databases for the foreseeable future. Those studying homicide from a comparative perspective should continue to seek out alternative databases such as these in order to ask new questions and make meaningful comparisons of homicide types at the incident and aggregate levels. In this way, scholars can continue to contribute to criminology's rich tradition of comparative homicide research.

Notes

1 Of course, there are some notable exceptions, such as the work of Brent Smith and colleagues (Smith, 1994; Smith & Damphousse, 1996, 1998).
2 While most studies have examined binary combinations of victim–offender relationship and motivational circumstances, some studies have broken down victim–offender relationships into multiple categories (Pizarro, 2008; Varano & Cancino, 2001).
3 Other aggregate-level research has relied upon alternative categorization schemes, finding that the effects of various structural variables are dependent upon race-specific victim–offender categories (Parker, 2001; Parker & Johns, 2002) and age groupings (Lee & Bartkowski, 2004), while other studies have also refined traditionally used homicide categories by developing more nuanced motive-based (Kubrin, 2003) and victim–offender (Diem & Pizarro, 2010) categorization schemes.
4 The FBI defines *terrorism* as "the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives" (http://www.nij.gov/topics/crime/terrorism/Pages/welcome.aspx), while Congress has defined *hate* or *bias crime* as a "criminal offense against a person or property motivated in whole or in part by an offender's bias against a race, religion, disability, ethnic origin or sexual orientation" (http://www.fbi.gov/about-us/investigate/civilrights/hate_crimes/overview).

5   In 2009, President Obama commemorated both of the bias crime victims by signing the Mathew Shepard and James Byrd, Jr., Hate Crimes Prevention Act, which extended legal protection to gender identity and sexual orientation minorities and cleared away obstacles inhibiting federal officials from investigating crimes suspected of being bias motivated.

6   The passage of the 1990 Hate Crime Statistics Act required the attorney general to collect data on crimes committed because of the victim's race, religion, disability, sexual orientation, or ethnicity.

7   The ATS, led by Distinguished Professor Brent Smith from University of Arkansas, has the distinction of being one of the oldest US terrorist crime databases, and the most complete record of the FBI's investigation of terrorism over the last three decades. For more information about the ATS, see Smith and Damphousse (1996, 1998).

8   The GTD was co-created by Professors Gary LaFree and Laura Dugan at the University of Maryland, and is considered the most comprehensive unclassified terrorism database in existence, including over 125,000 terrorism cases since 1970, though information about US homicides perpetrated by domestic extremists is limited. For more information about the GTD, go to www.start.umd.edu/gtd.

9   The ECDB was created in 2006 by Steven Chermak and Joshua D. Freilich, with support from the Department of Homeland Security Science and Technology Directorate (DHS S&T) and the National Consortium for the Study of Terrorism and Responses to Terrorism (START).

10 Other studies have detailed violence and crime committed by Far Rightists specifically, including the Ku Klux Klan's (KKK) involvement in lynching crimes (Tolnay & Beck, 1995; Wright, 1996); "boot stomping" and other brutal assaults committed by racist neo-Nazi/skinhead groups (Hamm, 1993; Kaplan, 1995; McCurrie, 1998); and the highly publicized armed robberies carried out by organizations such as the Order and The Covenant, The Sword, and the Arm of the Lord (CSA) (Barkun, 1989, 1997; Becker, Jipson, & Katz, 2001).

11 The ECDB defines Far Rightists as individuals who support aspects of the following beliefs/characteristics: They are fiercely nationalistic (as opposed to universal and international in orientation); anti-global; suspicious of centralized federal authority; reverent of individual liberty (especially their right to own guns, be free of taxes); and believe in conspiracy theories that involve (1) a grave threat to national sovereignty and/or personal liberty, (2) a belief that one's personal and/or national "way of life" is under attack and is either already lost or the threat is imminent (sometimes such beliefs are amorphous and vague, but for some the threat is from a specific ethnic, racial, or religious group), and (3) a belief in the need to be prepared for an attack by participating in paramilitary preparations and training and survivalism. This description does not include the mainstream conservative or Christian right movements (Freilich et al., 2014).

12 It should be noted that Gruenewald (2011) combined ideologically motivated and non-ideologically-motivated homicides into a single "Far Right homicide" category in this study.

13 Left-wing terrorists consisted of environmental and animal rights extremists.

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Financial Terror: Financial Crime Schemes Involving Extremists Linked to the American Far Right and al-Qaeda and Affiliated Movements

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Introduction

Although terrorism literature has grown in quantity and quality, less attention has been paid to non-violent crimes and their relationship to terrorism, often defined as ideologically motivated *violent* attacks (Belli, 2011; Clarke & Newman, 2006; Freilich, Chermak, & Simone, 2009). Specifically, less work has been done on financial crime activity involving those holding extreme political or religious ideological belief systems. This chapter focuses exclusively on these crimes and reviews findings from an ongoing research effort identifying crime committed by extremists in the United States. We provide an overview of financial crime and material support schemes committed or attempted by supporters of al-Qaeda and affiliated movements (AQAM) and supporters of the Far Right extremist movement inside the United States since 1990.

It is important to focus on these movements because they are widely seen as posing the greatest threat to public safety. Freilich, Chermak, and Simone (2009) surveyed the 50 state police agencies in the United States about their views as to which 17 specified extremist movements posed the most serious danger to national security and their individual state's security. Nearly all the respondents strongly agreed that "Islamic Jihadists" American supporters (comprised of al-Qaeda supporters and adherents to other similar organizations) and followers of Far Right extremist ideology were among the top terrorism-related national security threats facing the United States. Most also strongly agreed or agreed that they were a significant threat to their individual state's security. Similarly, a more recent survey of law enforcement intelligence officers that was fielded in 2013 concluded that the Far Right (and specifically sovereign citizens) and Islamic Jihadists remain the top concerns of law enforcement agencies (Carter, Chermak, Carter, & Drew, 2014).

This chapter addresses important gaps in the literature. First, by using the approach pioneered by LaFree and Dugan (2007), among others, we systematically collected data to construct a comprehensive database on financial and material support criminal schemes.

The database relied upon in this chapter provides clear inclusion criteria to produce empirical findings.

Second, our exclusive focus on financial crimes is unique in terrorism literature. Most other terrorism studies focus solely on ideologically motivated *violence* and neglect the nexus between terrorism and other types of crime. In other words, because financial crimes are mostly non-violent, they are usually not labeled as "terrorist" and therefore ignored by terrorism data collection efforts. This is an important omission. For example, practitioners involved in counterterrorism efforts (as well as some researchers and others) have noted that some terrorist groups have committed financial crimes to raise money for terrorist attacks and/or to maintain and support their organization. An increasing number of extremists today engage in criminal behaviors that are usually associated with profit-driven crime (deKieffer, 2008; Dishman, 2005; Hamm, 2007; Horgan & Taylor, 2003; Passas, 2003; Shelley, 2014; Shelley et al., 2005).

Third, since financial and material support crimes are difficult to categorize and quantify, we extend prior research by examining a unique unit of analysis called the "scheme." We use the "scheme" to capture the complexities of these offenses. We then systematically identify all financial crimes linked to AQAM and Far Right extremists in the United States. This chapter will review descriptive findings from this research.

Terrorism and Financial Crime

The nexus between terrorism and financial crime is usually discussed in terms of terrorism financing. This typically focuses on the various methods and tactics used to further international terrorism or fund specific terrorist organizations. Indeed, an increasing but still limited amount of research has discussed the use of crime by terrorists to support their operations (Hamm, 2007; Makarenko, 2004; Perri & Brody, 2011; Shelley, 2014). Many extremists have committed "preparatory crimes" to raise funds for specific ideologically driven violent plots (Kane & Wall, 2005; Picarelli & Shelley, 2007; Shelley, 2014; Smith & Damphousse, 2003). Terrorism has been linked to a wide array of financially related (non-violent) offenses, including tax fraud, money laundering and dirtying, identity theft, counterfeiting, and banking fraud (Freilich, Chermak, Belli, Gruenewald, & Parkin, 2014; Kane & Wall, 2005; Sullivan, Chermak, Wilson, & Freilich, 2014). However, the majority of research on terrorism has centered on a small number of high-profile violent incidents, while failing to mention financial crimes, material support, or preparatory crimes (Gruenewald, Freilich, & Chermak, 2009). Most of the literature that does exist on terrorism financing, much like other types of terrorism literature, is limited to individual cases or anecdotal evidence as opposed to systematic empirical research (Biersteker, Eckert, & Romaniuk, 2008; McCulloch & Pickering, 2005; Passas, 2007).

While most of the limited literature focuses on the funding of terrorist groups or crimes committed as form of financial support, a large amount of criminal activity has been overlooked, namely financial crimes committed with an ideological motive but not linked to any identifiable terrorist group. These individuals are motivated primarily by their belief system, aiming to further an agenda consistent with their values. In terms of terrorism in the United States, we refer both to supporters of AQAM, who believe in a global agenda of Islamic fundamentalist domination, and Far Rightists, who strongly distrust governmental authority, promote conspiracy theories, and use various legal and moral justifications for their criminal activities. Financial crimes engaged in by those who promote these broad

belief systems have been largely overlooked and are addressed in this chapter. While financial crime is certainly linked with a wide number of other terrorist groups and extremist causes, this chapter explicitly discusses the American Far Right and the extremists associated with AQAM.

Conceptualizing Financial Crime Schemes

Financial crimes are often committed during larger criminal operations involving multiple perpetrators and jurisdictions over an extended period of time. These crimes are difficult to study. To capture these nuances, we developed the concept of the *financial scheme*, defined as an "illicit financial operation involving a set of activities (i.e., techniques) carried out by one or more perpetrators to obtain unlawful gain or other economic advantage through the use of deliberate deception" (e.g., a money-laundering scheme that "cleans" money from illegal drug smuggling to fund a terrorist mission) (Freilich et al., 2014).

We operationalize financial crimes broadly as crimes that are financially related, but not considered financial crimes in the traditional sense. The most prominent examples of these are material support crimes and filing false liens. Material support schemes are operationalized as any act taken to aid terrorist activities and groups, including providing resources, supplies, equipment, training, personnel, or other non-financial critical support. Monetary funds provided to support terrorist activities or groups are coded as money dirtying financial schemes. False liens, known as a type of "paper terrorism," are fraudulent, legally binding financial obligations filed against an individual with the intention of causing financial harm. Both of these types of crimes are considered financial schemes for the purposes of this study.

Further, schemes have different motivations in terms of the extent to which they are driven by an extremist ideology. This can be thought of as a continuum from purely ideological to purely non-ideological. We consider a scheme to be ideologically motivated if it is committed primarily due to an extremist ideological belief system or to purposely support or finance extremist groups or those who share these extremist beliefs. For example, the provision of supplies or funds to an AQAM group or member to support its extremist ideological goals is considered an ideologically driven scheme.

Schemes are not considered ideologically motivated if they are related to an extremist ideology but are *not primarily driven* by the desire to further its extremist belief system. These are a hybrid between schemes that are ideological and non-ideological in motive, representing a middle ground between these two broader categories. For example, schemes perpetrated by individuals who are chiefly involved in a business relationship with AQAM are not considered to be ideologically motivated. Other schemes in this category include those that involve at least one AQAM supporter but are driven by purely non-ideological goals, such as profit or greed.

Data and Methods

We used data from the Financial Crimes section of the U.S. Extremist Crime Database (ECDB) (also referred to as the Extremist Financial Crime Database, or EFCDB),[1] which, in addition to tracking violent crimes,[2] also assembles open-source information on the financial crimes committed by extremists, such as tax avoidance, money laundering and dirtying,

and terrorist financing (Freilich et al., 2014). The ECDB does not limit itself to acts labeled as terrorist by the FBI and prosecuted on the federal level, nor does it exclude crimes committed for non-ideological purposes (i.e., profit). Most American terrorism databases and definitions, such as the FBI, require terrorist acts to use "force or violence" and exclude non-violent financial crimes. The ECDB has specifically targeted non-violent financial crimes as part of its inclusion criteria.

We placed several boundaries on the data collection and coding processes to establish the universe of cases. First, the scheme must involve a criminal investigation leading to an indictment in a US court of any jurisdiction for activities related to financial crimes (behavioral criterion). Second, some aspect of each scheme must have taken place at least in some part in the jurisdictional territories of the United States. Third, the crime must involve a financially related offense of some type. Fourth, the crimes are temporally bound, including cases occurring between 1990 and 2013. Finally, at least one of the suspects involved in the scheme must be a political or religious extremist (attitudinal criterion). These include ideologies supporting AQAM,[3] and Far Rightists,[4] such as white supremacists, sovereign citizens, militia/patriot movements, and tax protesters.

In the EFCDB, each case is treated as an individual case study for the purposes of identifying relevant schemes and the suspects involved. EFCDB utilizes over 30 web search engines,[5] terrorism databases (e.g., the American Terrorism Study and the Global Terrorism Database), official sources (e.g., Federal Bureau of Investigation reports and congressional testimonies), and watchdog-group reports (e.g., Anti-Defamation League and the Southern Poverty Law Center). These resulting data include media accounts, government documents, court records, videos, blogs, books, watchdog-group reports, movement materials, and scholarly accounts. This triangulation of multiple data sources overcomes the limitations of single sources, reducing the chances of bias and increasing reliability and construct validity (Chermak et al., 2012).

The relevant information resulting from the searches was assembled into individual search (word processor) files for each case. From these search files, multiple individual databases were created for analysis, including a scheme database (i.e., information on the criminal events and activities themselves) and a perpetrator database (i.e., known offenders involved in the scheme), which is an innovation extending beyond the majority of efforts focusing only on a single unit of analysis. As multiple research assistants originally coded the data, the lead author re-examined the reliability of the coding and made revisions for quality, consistency, and accuracy prior to analysis. By ensuring coding consistency in values across cases, potential issues with inter-rater reliability were addressed. In addition, similar to Sageman (2004), we account for source reliability by giving more weight to vetted sources, such as court documents, compared with other sources, such as personal blogs or even media reports. Coded data were initially entered into a Microsoft Access database, reviewed, and updated for errors as information became available to minimize missing data and selectivity bias.

Findings and Discussion

This section describes the intersections between extremist crime and financial crime in the United States as identified in the EFCDB. We first describe each ideological extremist movement in turn. We then contrast financial crime schemes committed by those linked to AQAM and the American Far Right.

AQAM

Between 1990 and 2013, those associated with AQAM engaged in 52 financial crime schemes and 93 material support schemes in the United States ($n = 145$). These schemes were committed by those who had an affiliation with or sympathy toward an AQAM group.[6] It is important to note that perpetrators involved in AQAM-linked financial and material support schemes were not necessarily members of terrorist groups or affiliated with official members. A preliminary examination of the type of AQAM connection revealed that those with explicit connections to an identifiable AQAM group made up only half of the perpetrators involved in financial and material support schemes. Others were not directly linked to any members of an AQAM group but sympathized with their ideological goals and wanted to support or join the group. These individuals made up one third of the total perpetrators involved in financial and material support schemes. The remaining 17% were non-extremist collaborators who engaged in criminal activities with extremists for personal profit or another motive aside from promoting the AQAM ideology. However, it should be noted that 30 of these non-extremists were involved in a single profit-oriented scheme involving only one AQAM sympathizer. When this scheme is removed from the analysis, non-extremists make up only 7% of all perpetrators.

Of the 145 financial and material support schemes linked to AQAM, 38% were linked to central al-Qaeda, and these involved 102 of the 279 total perpetrators. Nearly three-fourths of all non-extremist collaborators were involved in these central al-Qaeda-linked schemes. This is primarily due to a single scheme consisting of the laundering of profits from a cigarette-smuggling operation, which included one central al-Qaeda sympathizer and 30 non-extremists who were involved in the scheme purely for profit. When this scheme is removed from the analysis, there were 71 perpetrators (66 extremists) involved in central al-Qaeda-linked financial and material support schemes. Over three-fourths of the remaining perpetrators were direct associates of central al-Qaeda, making it the most represented group; 13% were central al-Qaeda sympathizers, and 8% non-extremist collaborators.

Al-Shabaab was linked to 22 schemes involving 42 perpetrators. All of these were monetary or material support schemes that involved individuals who tried to leave the United States and travel to Somalia to join al-Shabaab or support their efforts. Others facilitated the travel of those who wanted to join al-Shabaab. The largest portion of these schemes was linked to recruitment and fundraising networks based in Minneapolis (ADL, 2013; Leuprecht & Hall, 2013). Nearly two-thirds of these perpetrators were sympathizers with indirect links to al-Shabaab, while the remaining one third had direct associations with the group.

The Taliban was linked to 15 financial and material support schemes involving 27 perpetrators. These schemes almost exclusively involved monetary or material support for the Taliban. The perpetrators were a fairly even mix of sympathizers and direct associates, with only one non-extremist involved. The schemes were almost exclusively financing operations or other ideologically motivated schemes to support the Taliban's operations or broader ideological goals.

The remaining one-fourth of AQAM schemes involved 80 perpetrators and were linked to a wide array of AQAM groups, such as al-Qaeda in Iraq ($n = 5$), al-Qaeda in the Arabian Peninsula ($n = 4$), the Islamic Movement of Uzbekistan ($n = 5$), and Lashkar-e-Taiba ($n = 7$). Of these schemes, 25 were almost exclusively ideologically motivated and involved monetary or material support for these specific terrorist organizations. The remaining 13 involved 28 sympathizers with anti-US or anti-Western views, but no direct group affiliation; 10 of

these schemes involved ideologically motivated monetary or material support, and two of the three remaining schemes were profit-oriented.

The development of the Islamic State of Iraq and the Levant (ISIL) (also known as the Islamic State of Iraq and Syria, or ISIS) in 2013 has accompanied an increase in material support crimes in the United States. Between 2013 and June 2015, at least 20 additional individuals (not included in the data reviewed in this chapter) have been indicted for attempting to join or offering other support for ISIL. These are typically sympathizers with no direct connection to the group but with strong ideological motivations to support ISIL's mission and activities.

In terms of the actual criminal activities being carried out by AQAM affiliates and sympathizers, the most prominent by far is the provision of monetary or material support for terrorism. Monetary support is treated as separate from material support for the purposes of this discussion, and is referred to as money dirtying (see the text that follows). Material support schemes are designed to aid terrorist activities, groups, or other ideologically motivated activity. This usually consists of the provision of resources, supplies, training, or personnel. To be included in the analysis, some portion of the material support had to occur in the United States. This included perpetrators leaving or returning to the United States over the course of their activities, provided that charges were issued in a US court of any jurisdiction. Of the 93 material support schemes, 60% involved either travel or attempted travel overseas to join an AQAM organization or support the cause generally; 49% involved general guidance, information, training, or recruitment; and 17% involved the provision of supplies, equipment, or weapons. Material support schemes linked to AQAM were more frequently motivated by extremist ideology than the financial crime schemes. This is not surprising, given that the very nature of these schemes involves supporting terrorism. Of these schemes, 96% were committed to further an ideological goal, with 8% of these supporting specific violent acts. Four additional schemes were related to AQAM but were not primarily ideologically motivated. No material support schemes were entirely non-ideological in nature.

Monetary support for terrorism is referred to here as *money dirtying*, which is conceptualized as the inverse of laundering and involves money from any (legal) source being funneled into illegal activities. Money dirtying captures money transferred or supplied to terrorist organizations that did not necessarily derive from criminal activity, with the crime being predicated on the support of terrorism through the provision of funds. Much like material support schemes, these money-dirtying schemes were almost exclusively ideologically driven, with only one out of 29 not motivated by AQAM goals—12 were linked to central al-Qaeda, five to the Taliban, and four to al-Shabaab, with the remainder distributed among the remaining AQAM groups.

Of the remaining schemes, 17% consisted of banking schemes, which involved techniques such as falsifying statements for bank loans and passing bank checks with inadequate funds or false accounts. Four additional schemes involved money laundering, or converting illicit income from criminal activity to disguise the source of the money. All but one of these involved broader criminal operations, including drug trafficking and cigarette smuggling. The large number of individuals involved in money laundering largely reflects a scheme involving 31 perpetrators (described earlier). Finally, 19% consisted of a wide array of other financial crime activities, including credit card fraud, currency counterfeiting, cybercrime, identity theft, and tax avoidance.[7]

In contrast to the money dirtying and material support schemes, these other financial schemes were more likely to be driven by non-ideological motives. Specifically, 12 schemes were committed for a non-ideological goal such as profit or greed, and two additional

schemes were related to AQAM but not committed primarily to further ideological ends. The majority of these financial schemes involved at least one perpetrator linked to central al-Qaeda, while the remainder involved perpetrators linked to other AQAM groups.

American Far Right

Between 1990 and 2013, 609 financial crime schemes involving at least one Far Right political or religious extremist have been committed in the United States. These schemes were carried out by 1,345 individual offenders.[8] Of these, 72% were identified as Far Right extremists. The Far Right extremists involved in these schemes belong to a number of movement affiliations. While many individuals fit into multiple categories, only the primary affiliation is reported. The most prominent affiliation is with sovereign citizens, who believe they are freemen not subject to governmental authority. Sovereign citizens either declare themselves to be entirely sovereign entities or members of a state republic, often creating their own common law court systems. Of the perpetrators, 40% were identified as sovereign citizens. A much smaller number of other perpetrators (5% and 4%, respectively) were affiliated with militia or patriot groups and white supremacists (Ku Klux Klan, neo-Nazi, Christian Identity, etc.). An additional 23% were tax protesters. Tax protesters use a wide array of frivolous anti-tax arguments to morally and legally justify not paying taxes, arguing that taxes and other laws are unconstitutional, illegal, invalid, or voluntary.

   Another key finding was the involvement of non-extremists in financial schemes involving Far Right extremists. One-fifth of the individuals charged with participating in these schemes did not have any identifiable expression of extremist ideology. Non-extremist collaborators engaged in these schemes primarily for financial gain. This includes individuals with specialized expertise providing professional services. In other cases, individuals joined the scheme as a financial opportunity after being introduced by family members, friends, or associates. Many involved spouses going along with their partner's wishes, but not exhibiting any identifiable extremist ideological belief system themselves. It is important to note that many of these individuals could also have Far Right extremist attitudes and beliefs, but this could not be reliably determined through the available information.

   These financial schemes consisted of a wide array of criminal activities with a few notable patterns. By far, the most prominent schemes were tax avoidance, carried out as a form of anti-government protest. The majority of these schemes involved failing to file income tax returns, submitting false tax returns, and sending false documentation to officials in an attempt to obstruct or impede the collection of taxes. Other schemes involved the sale of anti-tax packages, where those looking to save money on taxes were charged extravagant fees and provided fake documentation, instructions on how to file false tax documents, and fake financial instruments to satisfy existing debts. Tax avoidance schemes often involved tax protesters who decided to stop participating in the federal tax system, responding by halting their tax withholdings and refusing to file tax documents. Most of these tax avoidance schemes involve various "frivolous arguments" about tax laws and the United States Constitution, all of which have been repeatedly rejected in court.

   Other popular schemes committed by Far Right extremists are false liens and check fraud. False liens are filed against public officials or other citizens, often in retaliation for criminal or civil proceedings brought against them or other movement affiliates. These liens typically claim billions of dollars in liabilities and are intended to both financially harm and intimidate the victim. Check fraud typically consists of fictitious, often self-manufactured

checks, money orders, or other similar financial instruments. This includes those utilized by proponents of the "redemption" or "strawman" theory, such as a "sight draft" or "bill of exchange."[9]

Numerous other schemes were also committed by members of the American Far Right. These included banking schemes, such as unsanctioned, alternative banking operations (e.g., warehouse banking[10]) and loan fraud, including mortgage and real-estate fraud. Far Rightists were also involved in investment schemes, including pyramid, Ponzi, or other types of securities fraud. Investment schemes often revolve around debt elimination or putative access to secret government accounts owed to US citizens. The remaining scheme types include identity theft, filing false legal or tax documents against officials (similar strategy as false liens), money laundering, insurance fraud, embezzlement, counterfeiting (currency and consumer goods), and Internet-based schemes.

The primary motivation for each scheme varied, but 58% were carried out based almost entirely on a political or religious extremist ideological belief system. Only 12% were not primarily motivated by ideology, but were carried out for profit or greed. The remaining 30% consisted of both ideology and profit as motivating factors.

Comparing Far Right and AQAM Extremist Financial Crime

There are various contrasts between the financial crime activities involving AQAM and Far Rightists in the United States. Perhaps the most notable is the number of people involved. While only 279 perpetrators were linked to financial crime schemes involving AQAM, nearly five times as many people (1,345 perpetrators) were involved in Far Right extremist schemes. This is not surprising, considering the demographic differences in the number of potential Far Rightists in the United States compared with potential jihadists.

Another notable difference is in the types of schemes being conducted. While Far Right schemes primarily involved tax avoidance, false liens, and check fraud, AQAM schemes were almost exclusively related to providing monetary or material support for terrorism. This speaks to the differences in ideology, opportunity, and network connections. Far Rightists are distrustful of the government and are prone to disregarding laws that they do not agree with, namely tax laws. It therefore makes sense that tax avoidance would be the most prominent scheme type involving Far Right extremists. False liens are typically filed against government officials, often in retaliation for acting in their official capacity. Check fraud schemes often involve the creation of fake financial instruments that Far Rightists believed are lawful according to their sovereign power to develop their own banking rules. Those sympathetic to Far Right views are more prominent in the United States than AQAM supporters, and are therefore more likely to be accepted and trusted, thus facilitating the ability to carry out these types of schemes. Even those who do not hold extremist attitudes and beliefs themselves may know someone who does and become involved due to the desire to obtain the financial benefits promised by these schemes.

Schemes committed by AQAM affiliates or sympathizers primarily involve sending money or resources to AQAM groups. These are inherently ideological in nature, partially explaining the stronger ideological connection for AQAM schemes as opposed to Far Right schemes. Far Right schemes are more difficult to interpret than monetary and material support, particularly due to the financial gain involved for those promoting tax avoidance strategies or cashing fake checks to pay existing debts. Giving money or resources to an extremist cause is easier to determine as ideological as opposed to criminal activities

undertaken primarily to benefit those running the scheme. While none of the material support schemes were non-ideologically motivated, similar percentages of AQAM and Far Right financial schemes were non-ideological (8% and 12%, respectively), motivated primarily by profit or greed. Despite this similarity, Far Right schemes had greater numbers of non-extremist collaborators than AQAM schemes, particularly when removing the one AQAM scheme with a single extremist and numerous non-extremists. This suggests that Far Right schemes have more variation in terms of extremist connections than AQAM schemes.

Conclusion

These findings point to important policy implications. This study demonstrates that focusing exclusively on violent extremists is artificially limiting, as many extremists become involved in financial crime activities. Financial crimes, such as tax avoidance, false liens, and monetary and material support for terrorism disrupt and defraud both citizens and governments while simultaneously supporting violent crimes by extremist movements, representing an area of growing concern. Further, despite the large number of Far Right extremists involved in using ideologically motivated tax avoidance as a form of anti-government protest and using false legal documents to obstruct and personally harm officials, fewer resources have been devoted toward Far Right domestic terrorism than to international terrorism, and the financial and organizational aspects of Far Right extremism in particular have not received adequate focus.

Many motivations and techniques drive these schemes. Although most center on ideological arguments to avoid taxes or obstruct law enforcement, others are non-ideological and motivated by profit. While some perpetrators have direct connections to extremist organizations, others are general sympathizers to an extremist cause with no identifiable links to any organizational members. The involvement of non-ideological collaborators with those who are ideologically motivated further complicates the intersections between crime and terrorism. Enforcement efforts should focus on everyone involved in criminal networks regardless of motive, expanding beyond those involved in known extremist groups. This study illustrates the importance of conducting systematic analyses of these financial schemes, including a more comprehensive focus on broader criminal networks of both extremists and non-extremists. These efforts will improve the development of evidence-based intervention strategies.

Finally, evidence suggests a clear link between extremist financial crime and violent crime incidents, necessitating increased attention. A preliminary analysis of ECDB data suggests that at least 20% of AQAM-related financial crime and material support schemes are linked to violent incidents or plots, and at least 40% are linked to other financial or material support schemes. While many of the perpetrators involved in financial and material support schemes did express willingness to fight with terrorist groups, others provided information, guidance, and supplies to AQAM groups to support their ideological goals. These perpetrators may facilitate violence while being unwilling to personally carry out violent attacks. Numerous Far Right schemes are also associated with violent incidents, while nearly 60% are linked to other financial schemes. Several of these are linked to violent standoffs with police, retaliatory acts of violence, and weapons stockpiling. It is important not to ignore these individuals by focusing only on those actually carrying out violent attacks. The addition of financial crime schemes into the

study of terrorism and extremism sets the stage for a more comprehensive overview of all types of extremist criminal activities in the United States.

Notes

1 For detailed explanation of how the ECDB database was created, see Chermak, Freilich, Parkin, and Lynch (2012) and Freilich et al. (2014).

2 Recent studies have relied on the ECDB to examine the evolution of domestic extremist groups (Freilich, Chermak, & Caspi, 2009), differences between violent and non-violent extremist groups (Chermak, Freilich, & Suttmoeller, 2013), comparisons between Far Right homicides and "regular" non-extremist homicides (Gruenewald & Pridemore, 2012), fatal attacks against the police (Freilich & Chermak, 2009; Suttmoeller, Gruenewald, Chermak, & Freilich, 2013), lone-wolf attacks (Gruenewald, Chermak, & Freilich, 2013a, b), ideologically motivated homicide victimization (Parkin & Freilich, 2015; Parkin, Freilich, & Chermak, 2015), and county-level variation in the location of extremist attacks (Chermak & Gruenewald, 2015; Freilich, Adamczyk, Chermak, Boyd, & Parkin, 2015).

3 We operationalize AQAM supporters as extremists who subscribe to aspects of the following beliefs. They believe that only the acceptance of Islam promotes human dignity. They reject the traditional Muslim respect for "People of the Book" (i.e., Christians and Jews), and believe that "jihad" (i.e., to struggle in the God's path similar to the Prophet Muhammad) is a defining belief in Islam and includes the "lesser jihad" that endorses violence against "corrupt" others. They believe that their faith is oppressed and under attack by governments in the Middle East and Asia that they view as nominally Muslim and corrupt, as well as in non-Islamic nations that they view as occupying indigenous Islamic populations (e.g., Israel/Palestine, Russia/Chechnya, India/Kashmir), which are arguments often used for political and military mobilization. The United States is seen as supporting the humiliation of Islam and exploiting the region's resources. They consider America's culture to be hedonistic (e.g., with its support for gay rights, feminism) and view it as negatively affecting Muslim values. They also believe that the American people are responsible for their government's actions, and that there is a religious obligation to combat this perceived assault. They believe that Islamic law—Sharia—provides the blueprint for a modern Muslim society, and that it should be forcibly implemented (Freilich et al., 2014). By AQAM, in addition to central/core al-Qaeda, we refer to al-Qaeda in Arabian Peninsula (AQAP), al-Qaeda in the Islamic Maghreb (AQIM), the Taliban, the Pakistani Taliban, al-Shabaab, the Islamic Movement of Uzbekistan, Lashkar-e-Taiba (LeT), the Islamic Jihad Union (IJU), the Islamic Group, Jabhat al-Nusra (or al-Nusra Front), al-Gama'a al-Islamiyya, al-Itihaad al-Islamiya (AIAI), and Abu Sayyaf. We also include the Islamic State of Iraq and the Levant (ISIL), also known as the Islamic State of Iraq and Syria (ISIS), the Islamic State of Iraq (ISI), and the Islamic State (IS), and formerly known as al-Qaeda in Iraq. Finally, those with no identifiable group affiliation but with anti-West or anti-US sentiments promoting violent global jihad are included in this report. Violent extremist groups related to organizations or causes dealing with local conflicts are excluded, including organizations such as Hezbollah, Hamas, the Muslim Brotherhood, Mujahedeen Khalq, Palestinian Islamic Jihad (PIJ), and Jamaat ul-Fuqra.

4 Far Right extremists subscribe to aspects of the following beliefs: They are fiercely nationalistic, anti-global, suspicious of federal authority, and reverent of individual liberties, especially their right to own guns and be free of taxes. They believe in conspiracy theories involving imminent threats to national sovereignty or personal liberty and beliefs, that their personal or national "way of life" is under attack. Sometimes such beliefs are vague, but for some the threat originates from specific racial or religious groups. They believe that they must be prepared to defend against this attack by participating in paramilitary training or survivalism. The mainstream conservative movement and mainstream Christian right are not included (Freilich et al., 2014).

5   EFCDB has developed specialized search protocols using the following search engines: Lexis-Nexis; Proquest; Yahoo; Google; Copernic; News Library; Infotrac; Google Scholar; Amazon; Federation of American Scientists; Google Video; Center for the Study of Intelligence; Surf Wax; Dogpile; Mamma; Librarians' Internet Index; Scirus; All the Web; Google News; Google Blog; Homeland Security Digital Library, Vinelink; Inmate Locator; Bureau of Prisons; Individual State Departments of Corrections (DOC); Black Book Online; Quantloos; Anti-Defamation League (ADL); Southern Poverty Law Center (SPLC); and Center on Law and Security.

6   For the purposes of this discussion, we refer to the most prominent group identified as related to the scheme (the main unit of analysis). If a scheme was linked to a particular group, we coded each perpetrator involved in that scheme as linked to that group. We recognize that some schemes are linked to multiple groups, and that not all perpetrators involved are linked to AQAM; we attempt to address these nuances to some degree, but a more complete discussion is left for future studies.

7   Immigration fraud schemes involving the misuse of visas or passports were not categorized as financial crimes unless they had a specific financial component, such as a large-scale operation selling false documentation or stolen identities for profit in the United States. At least 75 potential immigration fraud cases have been identified through EFCDB data collection strategies, although a more comprehensive effort would be needed to obtain accurate numbers.

8   The total of 1,345 includes 112 unknown individuals who were referenced in the open-source materials used by EFCDB but whose identities could not be determined.

9   The popular "redemption" theory states that the US Treasury Department has created secret bank accounts for each US citizen, called a "strawman," and that this can be utilized by citizens to pay taxes and other debts through the use of fake financial instruments (often fictitious US Treasury checks known as a "sight draft" or "bill of exchange"). The theory also claims that Form 1099-OID can be sent to creditors, who can present them to the US Treasury to satisfy personal debts. For more information on sight drafts, bills of exchange, or the redemption/strawman conspiracy theory, see US Department of Treasury (2014), Southern Poverty Law Center (2005), and Sanchez (2009).

10   Warehouse banks allow individuals to disguise their financial transactions by combining their money with that of a large number of other people, typically done to avoid government scrutiny. For an example of the use of warehouse banking by Far Right extremists, see Anti-Defamation League (2002).

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An Empirical Analysis of Maritime Terrorism Using the Global Terrorism Database

Bo Jiang

The focus of this chapter is on maritime terrorism, which, in terms of its aims, objectives, and strategic design, is no different from terrorism that occurs on land or in the air. The Global Terrorism Database (GTD) is used to examine the patterns of attack types, weapons used, and casualties that occurred during these attacks. The GTD includes 183 attacks that happened in 44 different countries, perpetuated by 63 terrorist organizations from 1971 to 2013. This study also contextualizes maritime terrorism by uncovering distinctive developmental trends across countries and terrorist organizations.

The findings support the view that a few countries and terrorist organizations have stable concentrations of attacks over time. Moreover, a small percentage of terrorist organizations and countries belong to trajectory groups with steeply rising numbers of attacks, and these organizations and countries are largely responsible for worldwide maritime terrorist attack trends.

The remainder of the chapter is organized as follows. In the section titled "Prior Research on Maritime Terrorism," past maritime terrorism research is discussed, while the distribution of the types of weapons used in all of the maritime terrorist attacks is presented in the section titled "Weapons Used in Maritime Terrorism." The sections titled "GBTA" and "Applying GBTA to the Maritime Terrorist Attacks of 44 Countries" provide a descriptive analysis of the developmental sequences within terrorist organizations and countries over time. In the section titled "Case Studies of the Eight Most Active Terrorist Organizations," the characteristics of the top terrorist organizations responsible for the most casualties are presented, examining attack, weapon, and target types. The last section, titled "Discussion and Conclusions," presents conclusions.

Prior Research on Maritime Terrorism

This chapter adopts the GTD definition of a terrorist attack (LaFree, Dugan, & Miller, 2015:13) and applies it to the context of maritime terrorist attacks. *Maritime terrorism* is thus defined as "the threatened or actual use of illegal force and violence by a non-state

actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation" on *maritime* targets. These targets include seafarers,[1] port/terminals, cargo/bulk carriers, oil tankers, ferry/cruises, fishing vessels, and other types of ships. As concise and clear as the definition appears, there is a great deal of complexity when applying it to actual attacks. One requirement is that attacks must be perpetuated by non-state actors (LaFree, Dugan, & Miller 2015). Thus, maritime attacks carried out by governments are excluded. Also, the threat of using violence (and not just its actual use) can satisfy the definition and be counted as maritime terrorism. For example, individuals who seize seafarers as hostages or seize a vessel, and threaten violence but never actually commit violence, satisfy the GTD definition of maritime terrorism. Finally, the requirement that the act must be committed to further a politically motivated goal necessarily excludes non-ideologically-motivated criminal behaviors at sea, including most acts of maritime piracy.

Many scholars contend that terrorism is a rare event within the range of human behavior (LaFree & Dugan, 2004; LaFree, Dugan, & Miller, 2015). Given that the number of terrorist attacks at sea is extremely small in proportion to the total amount of terrorism overall, the argument that maritime terrorism is a rare event within the universal realm of terrorism is presented. According to the GTD, incidents of maritime terrorism have amounted to slightly over 1% of all terrorist attacks recorded from 1970 to 2013. Due in part to the small number of cases, there is little prior quantitative research that has examined the prevalence and correlates of maritime terrorism across the world. However, a number of prior studies on maritime terrorism have taken a conceptual approach and focused on historical context (Mueller & Adler, 1985; Eklof, 2006; Elleman et al., 2010); socioeconomic conditions that nourish maritime terrorism (Johnson & Valencia, 2005; Young, 2007, Murphy, 2007); links between organized crime, terrorists, and maritime piracy (Chalk, 2000; Ong-Webb, 2006; Murphy, 2009); consequences of maritime terrorism (Murphy, 2009; Greenberg et al., 2006); the nexus between maritime piracy and terrorism (Burgess, 2010); and military's and private industry's responses to maritime terrorism (Liss, 2011; Beckman, 2012). Some prior research involves fieldwork and interviews with suspected terrorists or law enforcement officers who have investigated maritime terrorism (Murphy, 2009). Although some of these studies shed light on maritime terrorism from a qualitative perspective, most fail to provide general estimates about the characteristics and extent of maritime terrorism worldwide. This chapter aims to fill this gap by contributing to the relatively scarce literature on the quantitative analysis of maritime terrorist attacks. This empirical analysis is based on group-based trajectory analysis (GBTA). A detailed account of the method's statistical underpinnings and a full range of applications are provided in Nagin (2005) (see also, Morris, this volume). Before running the GBTA, the weapons used in perpetuating maritime terrorism and their prevalence across the world are first presented.

Weapons Used in Maritime Terrorism

The discussion begins by showing the distribution of weapons used in maritime terrorist attacks recorded in the GTD. According to Figure 28.1, about three-quarters of all maritime terrorist attacks rely on readily accessible weapons. All other weapons combined account for 5% of attacks. These include incendiary attacks, melee attacks, and equipment sabotage. In about one-fifth of all attacks, the weapon used is unknown.[2]

Figure 28.1 shows that 44% of all attacks involve firearms ranging from guided missiles, anti-tank guided weapons, rocket-propelled grenades (RPGs), machine guns, mortars, and
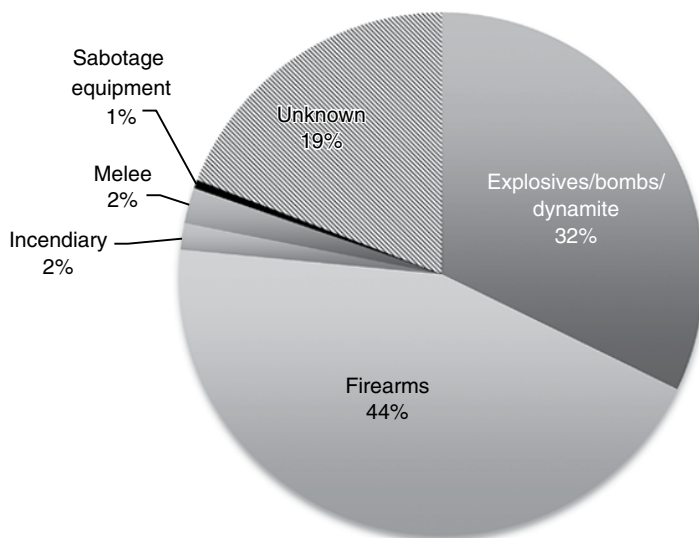
Figure 28.1   Number of Attacks by Weapon Types, 1971–2013 (*N* = 183)

"Katyusha"-style rockets to man-portable air defense systems (MANPADS). When mounted on a small craft, these weapons have a relatively low chance of success. Nevertheless, RPGs, machine guns, and mortars have often been used to cause death or injury to sailors, and to force crews to abandon ships (Chalk, 2006).

About one-third of all attacks were committed using explosives or bombs. Examples of such attacks include small boats equipped with high-charge explosives, as well as naval mines. Small boats rigged with improvised explosive devices (IEDs), a combination that is known as a water-borne improvised explosive device, are maritime terrorists' preferred choice, because they are highly maneuverable and fast moving, according to Murphy (2009). The author claims that a rigid-hulled inflatable boat is capable of carrying 100–1,000 kilograms of explosives, and he estimates that the inflicted damage will be of the magnitude of a car bomb. Most importantly, they sit low in the water and provide almost no radar signature, making them difficult to detect. On the other hand, the author also estimates that a large recreational boat can carry 3–25 tons of explosives—approximately equivalent to the potential damage a truck bomb can inflict.

Worthy of mention are two high-profile examples of successful attacks by small boats rigged with IEDs: the attack on the USS *Cole* (with 227 kilograms of explosives) and the attack on the French tanker *Limburg*. Scholars have noted that most attacks using small boats have been executed through suicide operatives (Chalk, 2006; Sakhuja, 2003). For example, the Sea Tigers branch of the Liberation Tigers of Tamil Eelam (LTTE) has successfully used multiple small boats for the majority of their suicide missions (Gunaratna, 2001). One suicide small boat can cause serious but not catastrophic damage to targets, leading Chalk (2002) to argue that the coordinated action of multiple small boats are required to deliver sufficient ordnance to achieve the sinking of a ship. This is exactly what happened to the Sri Lankan Navy's largest warship *Sagarawardene* in 1994, according to Bharadwaj (2000). The Basra oil terminals were likewise attacked using small boats loaded with explosives (Howland, 2004). The *Limburg* attack shows that a small boat loaded with explosive charges and rammed against the outer hull of a double-hulled vessel can only breach the

outer and not the inner hull, and will not be able to sink the ship (Sakhuja, 2006). However, Murphy (2009) observes that maritime terrorists could learn from their land-based counterparts, who use a vehicle bomb to first compromise the target' defense, paving the way for the second vehicle bomb to detonate in close proximity to the target and inflict maximum damage. There are quite a number of limitations to using small boats in attacks, and Murphy (2009) argues that conducting this strategy at sea instead of on land is extremely challenging. In particular, the small size of the attack boats makes them susceptible to turbulence and backwash. However, sinking a vessel is not always the ultimate motive of maritime terrorists, as in the case of the USS *Cole* where crippling an iconic ship to capture worldwide media attention may be considered a success (Jenkins & Treverton, 2007).

In short, small boats rigged with explosives are appealing to maritime terrorists because they fit well with the general goal of conducting opportunistic, smaller-scale attacks that nonetheless draw considerable attention (Murphy, 2007, 2009).

Another effective alternative to small boats are naval mines (Truver, 2008). According to the GTD, in 1984, over 20 vessels hit anchored mines in the Red Sea around the Bab el-Mandeb strait and the entrance to the Suez Canal. The Islamic Jihad claimed responsibility for all of these attacks, and Truver notes that the Egyptian government found that a Libyan vessel *Ghat* planted the mines during its transit through the Suez Canal. Moreover, Bernitt and Tangredi (2002) claim that naval mines are also effective psychological weapons. The maritime attackers need not physically sink ships using naval mines. Even the suspicion of the presence of naval mines is enough to force ports to close and impose substantial economic costs.

Figure 28.2 illustrates how often the five most common maritime terrorist weapons (explosives/bombs/dynamite, firearms, incendiary, melee, and sabotage equipment) have been used across all nine of the global regions distinguished in the GTD. Firearms are used in 81 cases, or 44% of the total attacks. Given their relative ease of availability in the black
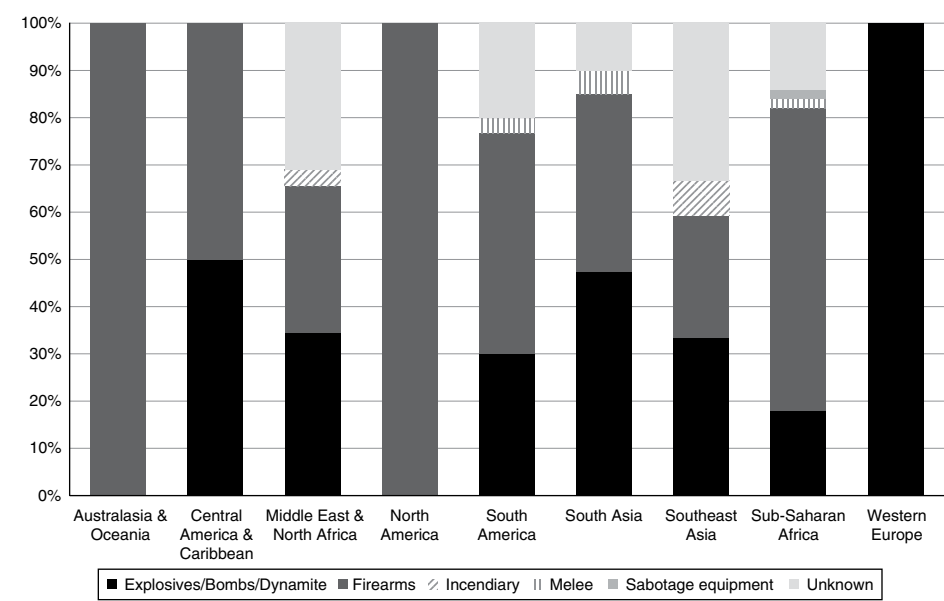
Figure 28.2   Weapons Used Across Regions, 1971–2013 (*N* = 183)

market, it is hardly surprising that, with the exception of Western Europe, firearms are used extensively against maritime targets across the globe. In particular, 64% of all attacks in sub-Saharan Africa are perpetuated using firearms.

Explosives/bombs/dynamite is another popular choice of weapon among maritime terrorists around the world except in Australasia and Oceania; North America; and Western Europe; and they are involved in 59 (32%) of the attacks shown in Figure 28.2. They are most commonly used in South Asia and are responsible for 19 (50%) attacks that occurred in the region. Taken together, these two weapon types are involved in all of the attacks in Australasia and Oceania; Central America and the Caribbean; North America; and Western Europe; and in more than 80% of all cases in South Asia and sub-Saharan Africa. Incendiary, melee, and sabotage equipment are used in only about 4% of all attacks, while the weapon type in 19% of all cases is unknown.

GBTA

Given that maritime terrorist attacks are an ongoing phenomenon, it is useful to study them longitudinally. To accurately capture the trends of attacks and their associated consequences, a methodological strategy that accounts for both change and continuity over a long period of time needs to be employed. A number of quantitative techniques are appropriate for modeling the dynamic patterns of attacks at the country and group level over time—for example, latent growth curve analysis, hierarchical modeling, survival analysis, time series analysis, and trajectory analysis. As compared with other methods, GBTA is attractive because long-term trends can be studied by capturing developmental processes in a dynamic longitudinal framework (Nagin, 2005; Morris, this volume). In this chapter, the application of GBTA to study the number of attacks at the country as well as the group level over time is illustrated. Nagin and Land (1993) first introduced GBTA as a method to model developmental patterns or life-cycle changes of individual criminality. But criminologists have also applied GBTA to map the distribution of crime across geographical locations (Weisburd et al., 2004, 2009), as well as terrorist activities at the group level (Dugan et al., 2007; LaFree et al., 2006). Groff et al. (2009) summarizes the strengths and weaknesses of applying GBTA to places rather than people.

GBTA approximates the population with a set number of groups that follow distinctive developmental pathways. As a result, GBTA helps identify unobserved clusters of terrorist groups or countries and estimate their developmental patterns. In the following two trajectory analyses, it is first examined whether maritime terrorist attacks will follow the same geographical concentration patterns, and second, the terrorists groups that follow qualitatively distinct paths are identified. By understanding why certain countries/terrorist organizations follow one pathway instead of another, we may gain important insight into their differing etiologies.

As shown in Figure 28.3, based on an analysis of the data with GBTA, it is identified that the 183 cases of maritime terrorism fit into five "trajectories"—that is, broad patterns of activity that share similar trends. Figure 28.3 presents the actual average number of attack counts in each trajectory group from 1971 to 2013. A linear curve is fit to the average number of attack counts at each time point for each trajectory group to aid in the classification. To better identify the underlying heterogeneity in the population, the five trajectories into common patterns—stable, increasing, and decreasing trajectories—are next classified.
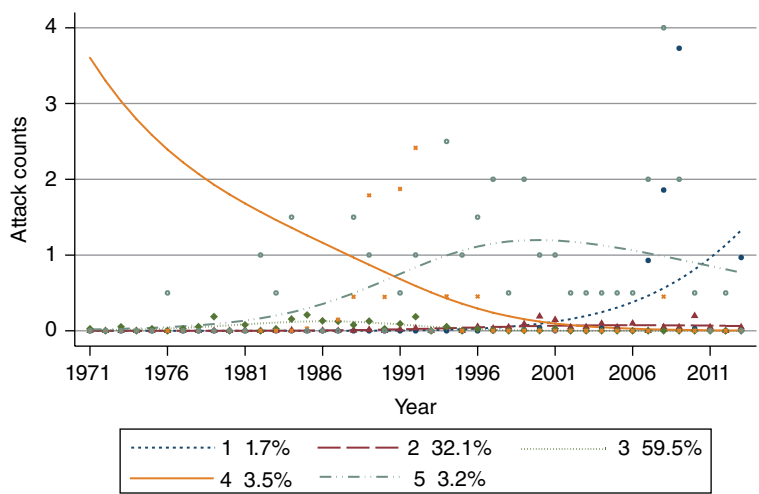
Figure 28.3   Five Trajectory Group Solution for Terrorist Groups

Table 28.1 depicts the terrorist organizations falling under each trajectory group. The stable trajectory groups or "low decliners" had slopes very close to 0. Two of the five trajectories identified fit this pattern, and represent 91.60% of all terrorist groups examined as shown in Table 28.1. Importantly, this trajectory had a relatively low intercept (0.14) and may be classified more generally as the "attack-free" terrorist groups, given that its trajectory remains close to zero for most of the study period. This suggests that the 91.60% of the terrorist groups are not responsible for the fluctuation in the total number of attacks observed.

There are two trajectory groups or "late risers" that represent noticeable increasing slopes during the study period, and they constitute the bulk of the volatility of attacks in the study period. First, Table 28.1 shows that Group 1,[3] or the "sustained late risers," account for 1.70% of the terrorist groups, and the overall change in the number of attacks noted here are generally relatively modest. It begins with an average attack rate near 1 in 2006 and increases about fourfold within 3 years, before declining to zero attacks from 2010 to 2012 and then subsequently increasing to 1 in 2013. Second, Group 5, or the "transient late risers," accounts for two (or 3.20%) of the terrorist groups, and they perpetuated 61 or about one-third of all attacks shown in Table 28.1. Group 5 begins increasing from the early 1980s onward and climbs steadily before reaching the first peak in around 1994. From 1994 to 2006, the average number of attack counts decrease from 2.50 to 0.50 attacks before peaking again in 2008 with an average attack rate of 4. This number drops drastically from 4 to 0 from 2008 to 2010, and then rises to 0.50 in 2012. Of the 61 attacks perpetuated by terrorist organizations in Group 5, the LTTE is responsible for 21 attacks, while the rest are conducted by unknown groups, as Table 28.1 illustrates. Salient characteristics of the LTTE will be discussed in greater detail later in the chapter.

The final trajectory group or "transient decliners" account for 3.50% of all terrorist groups and can be classified as having a decreasing slope. The extent of the declining slope is relatively steep. There are no attacks from 1971 to 1986 or from 1986 to 1991, but then the average attack rates increase substantially to about 2.50, before declining to almost no attacks from 2001 onward. There are 18 (or 9.89% of the total) maritime terrorist attacks carried out by terrorist groups in Group 4, according to Table 28.1.

Table 28.1 Terrorist Organizations in Trajectory Groups 1–5, 1971–2013

Trajectory Group	Group Names (Number of Attacks, 1971–2013)	Total Number of Groups (%)	Total Number of Attacks (%)
1	Movement for the Emancipation of the Niger Delta (MEND) (8)	1 (1.59%)	8 (4.40%)
2	Abdullah Azzam Brigades (1), Abu Sayyaf Group (ASG) (4), Africa Marine Commando (2), al-Gama'at al-Islamiyya (IG) (1), al-Qaeda (1), al-Shabaab (1), Deccan Mujahideen (1), East Timorese Activists (1), Gunmen (1), Hamas (Islamic Resistance Movement) (1), Individual (1), Moro Islamic Liberation Front (MILF) (3), National Council for Defense of Democracy (NCDD) (1), Niger Delta Vigilante (NDV) (1), Other (1), Paramilitaries (1), People's Revolutionary Army (ERP) (1), Revolutionary Armed Forces of Colombia (FARC) (4), Sudan People's Liberation Army (SPLA) (1)	19 (30.16%)	28 (15.38%)
3	Abu Nidal Organization (ANO) (2), Aidid Militia (1), Artigas-Giachino Command (1), Autonomy-Seeking Arabs (2), Black September (1), Black Wednesday (2), Christians (2), Coordination of the United Revolutionary Organization (CORU) (1), Eritrean Liberation Front (1), Force 17 (1), Irish Republican Army (IRA) (1), Islamist Extremists (1), Khmer Rouge (1), Kurdistan Workers' Party (PKK) (2), Manuel Rodriguez Patriotic Front (FPMR) (1), Moro National Liberation Front (MNLF) (6), Mozambique National Resistance Movement (MNR) (2), Muslim Militants (1), National Liberation Army of Colombia (ELN) (3), National Patriotic Front of Liberia (NPFL) (1), National Union for the Total Independence of Angola (UNITA) (1), New People's Army (NPA) (1), Nicaraguan Democratic Force (FDN) (1), Nicaraguan Resistance (1), Palestine Liberation Front (PLF) (1), Palestinians (2), Papua New Guinea Troops (1), Polisario Front (6), Popular Front for the Liberation of Palestine (PFLP) (1), Seaborne Moslem Raiders (1), Shining Path (SL) (5), Somali National Movement (1), Sudanese People's Liberation Forces (2), Surinamese Amerindians (1), Tacayana Indians (1), Tamils (3), Tuaregs (1), Tucayana Amerindians (0), Tupac Amaru Revolutionary Movement (MRTA) (4)	39 (61.90%)	67 (36.81%)
4	Pirates (9), Shanti Bahini—Peace Force (9)	2 (3.17%)	18 (9.89%)
5	Liberation Tigers of Tamil Eelam (LTTE) (21), Unknown (40)	2 (3.17%)	61 (33.52%)

Applying GBTA to the Maritime Terrorist Attacks of 44 Countries

By doing a trajectory analysis for all maritime terrorist attack cases over time, the extent to which countries can be grouped into distinct patterns of maritime attack activities can be better examined. Using the GTD from 1971 to 2013, 44 countries with at least one maritime
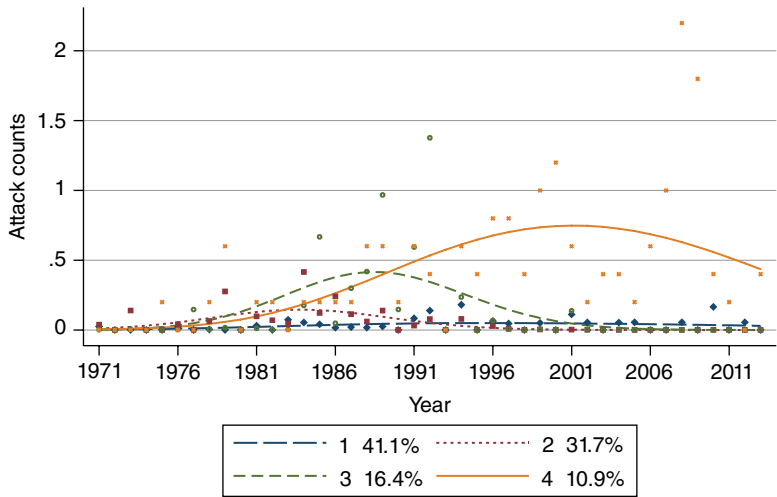
Figure 28.4 Four Trajectory Group Solution for Countries

terrorism attack are identified. Figure 28.4 shows the results of a trajectory analysis for these 44 countries. According to Figure 28.4, the 44 countries with maritime terrorism fit into four broad groups of terrorist activity patterns.

Although the number of countries in Groups 3 and 4 are similar, there are more than twice as many attacks in Group 4 than in Group 3. Figure 28.4 shows that the countries in Group 3 experience a rapid increase in attack counts in the early 1980s with a series peak in 1989, before steadily declining to a low rate starting in the early 2000s. As for Group 4, the magnitude of the increase is larger and its duration is longer than that of Group 3. The number of attacks in Group 4 climbs steadily from the 1970s to 2001, before it begins to decline until the end of the study period. The turning point for Group 4 occurs in 2001 with a peak average attack count of about 0.75. As for Group 3, the turning point occurs in 1989 with a peak average attack count of 0.45. The countries in both Groups 3 and 4 average about four attacks per year. Conversely, Figure 28.4 reveals that Groups 1 and 2 exhibit a low frequency of attack throughout the study period, and countries falling under these two groups can be termed "minimal risers." Figure 28.4 also shows that there is some degree of stability in the ordering of the four trajectory groups during the study period. Group 3 experiences the most attacks until the late 1980s. From 1989 onward, the average number of attacks for countries in Group 4 grows past that of Group 3 and remains higher until the end of the study period.

The countries in each trajectory group are shown in Table 28.2. Based on the general patterns, there is quite a bit of diversity in terms of the average number of maritime terrorist attack counts in the sampling period for these four categories of countries. Most evidently, two of the groups (Groups 3 and 4) have relatively high attack counts, although they peak at different points in time. One group (Group 2) has low attack counts, with the exception of a mild upswing in attacks around the early 1980s. Another group (Group 1) has very low attack counts throughout the study period. For each of the four groups, the percentage of countries in each is shown under the figure. Group 1, or the "minimal late risers," constitutes the largest proportion of countries, with 41.10% or about 18 countries. In comparison, Group 4, or the "transient late risers," has the smallest proportion of countries, with 10.90% or about five countries.

Table 28.2 Countries in Trajectory Groups 1–4, 1971–2013

Trajectory Group	Country (Number of Attacks, 1971–2013)	Total Number of Countries (%)	Total Number of Attacks (%)
1	Burundi (2), Cambodia (2), Cameroon (3), Cuba (1), Ethiopia (1), India (2), Indonesia (1), International (1), Israel (2), Laos (1), Mali (1), Myanmar (1), Pakistan (1), Papua New Guinea (1), Sierra Leone (1), United Arab Emirates (1), Vietnam (1)	17 (38.64%)	23 (12.57%)
2	Angola (2), Chile (2), Cyprus (1), Falkland Islands (1), Guadeloupe (1), Iran (4), Lebanon (5), Morocco (3), Mozambique (2), Nicaragua (2), Northern Ireland (1), South Yemen (1), United States (1), West Bank and Gaza Strip (1), Western Sahara (3)	15 (34.09%)	30 (16.39%)
3	Bangladesh (11), Ecuador (3), Egypt (3), Peru (10), Sudan (5), Suriname (3), Turkey (4)	7 (15.91%)	39 (21.31%)
4	Colombia (11), Nigeria (21), Philippines (21), Somalia (12), Sri Lanka (26)	5 (11.36%)	91 (49.73%)

Table 28.2 tabulates the distribution of countries in each of the four trajectory groups identified. Group 3, or the "transient risers," consists of 15.91% of all countries (seven); whereas, Group 4, or the "transient late risers," consists of 11.36% of all countries (five). Columns 3 and 4 of Table 28.2 provide a general assessment of the degree of concentration of maritime terrorist attacks during the study period. Specifically, the five countries under Group 4 account for about half of the recorded attacks, whereas, in Group 3, seven countries are responsible for about one fifth of the attacks. Taken together, these 12 countries alone are responsible for about three-quarters of all attacks, as illustrated in Table 28.2. According to Table 28.2, the two sets of countries in Groups 1 and 2 jointly include about three-quarters of all the countries, but they account for less than one third of all maritime terrorist attacks. We can interpret this as evidence of geographic concentration of attacks, and that most countries experience relatively few attacks. During the study period, the average country in Group 1 suffered a total of 23 attacks, or less than one attack per year. Group 2 includes 15 countries, one third of all the countries examined. As with Groups 3 and 4, countries in Group 2, or the "transient risers," experience a very modest increase in maritime terrorist attacks from the early 1970s to the 1980s, before declining to zero in the early 1990s. The turning point of the series occurs in 1983 with an average of 0.2 attacks per year. The peak value of Group 2 as well as the duration of the upswing is smaller than that of Groups 3 and 4.

Collectively, Table 28.2 shows that Groups 2, 3, and 4 represent nearly 60% of all attacks examined. In particular, the countries in Group 4 can be seen as the persistent global centers of maritime terrorist attacks. In these countries, there is usually one active terrorist organization that has operated within the country for long periods and accounts for a large part of the maritime attacks sustained. These patterns are illustrated in Table 28.3. For instance, in Asia, the LTTE have long operated in Sri Lanka and perpetuated 21 maritime attacks, or about 12% of all attacks. Also, the Moro groups have long established themselves in the Philippines and conducted most of the attacks in that country. In Bangladesh, the Shanti Bahini—Peace Force group have carried out almost all of the recorded maritime

attacks. In South America, the Revolutionary Armed Forces of Colombia (FARC) and the National Liberation Army of Colombia (ELN) were responsible for more than three-quarters of the attacks. For Peru, the groups Shining Path and Tupac Amaru Revolutionary Movement (MRTA) perpetrated all except one of the attacks in the study period. Turning to Africa, the relationship between countries and groups is less clear. For example, half of the attacks in Somalia and 60% of the attacks in Nigeria were perpetuated by unknown groups. These group-level patterns are further discussed in the following section.

Based on the results shown in Figure 28.4 and Table 28.2, it can be concluded that global trends in maritime terrorist attacks have increased steadily since the late 1970s. About 40% of the countries experienced little or no maritime terrorist attacks throughout the study period; 32% of the countries reached the series high point in 1984, 16% of the countries in 1989, and 11% of the countries in 2001. Starting in 2001, 89% of the countries experienced almost no attacks until the end of the study period, whereas 11% of the countries experienced nearly all the attacks.

The preceding trajectory analysis identified five countries in Group 4 (Colombia, Nigeria, Philippines, Somalia, and Sri Lanka) with high average counts of maritime terrorist attacks. Terrorist organizations (the two Moro groups, Shanti Bahini—Peace Force, ASG, LTTE, SL, ELN, MEND, and FARC) that have long operated in these countries also have high average rates of attack counts, as shown in Table 28.3, which lists the countries in trajectory Group

Table 28.3 Countries in Trajectory Group 4 and Their Terrorist Organizations, 1971–2013

Country	Group Names	Number of Attacks
Colombia	Revolutionary Armed Forces of Colombia (FARC)	4
	National Liberation Army of Colombia (ELN)	3
	Paramilitaries	1
	People's Revolutionary Army (ERP)	1
	Gunmen	1
	Unknown	1
Nigeria	Movement for the Emancipation of the Niger Delta (MEND)	8
	Niger Delta Vigilante (NDV)	1
	Unknown	12
Philippines	Moro National Liberation Front (MNLF)	6
	Moro Islamic Liberation Front (MILF)	3
	Abu Sayyaf Group (ASG)	4
	Pirates	2
	Seaborne Moslem Raiders	1
	New People's Army (NPA)	1
	Unknown	4
Somalia	Aidid Militia	1
	Al-Shabaab	1
	Islamist Extremists	1
	Pirates	1
	Somali National Movement	1
	Other	1
	Unknown	6
Sri Lanka	Liberation Tigers of Tamil Eelam (LTTE)	21
	Tamils	3
	Unknown	2

4 and their terrorist organizations. Given their frequent activities, it is useful for us to examine the casualties, attack types, weapons used, and targets attacked for these groups. The discussion in the next section focuses on these characteristics for the top eight most active terrorist organizations.

Case Studies of the Eight Most Active Terrorist Organizations

The "Moro" Groups

The first case study is of two terrorist organizations with long histories and well-established maritime footprints, that is, the two Philippine "Moro" groups: the Moro National Liberation Front (MNLF) and the Moro Islamic Liberation Front (MILF). In 1984, a number of factions split from the MNLF, including the MILF, so as to emphasize the ideological importance of Islamic renewal as part of the struggle for Muslim self-determination (Davis, 2000). Davis notes that, in 1996, the MNLF splintered again when disgruntled members defected to the MILF after the MNLF signed a peace agreement with the Philippine government. Peace negotiations and cease-fire agreements between the MILF and the Philippine government over the years have been largely unsuccessful, and group members continue to wage maritime terrorism off the coast of southern Philippines. Various estimates indicate that MILF has a force of approximately 10,000–15,000 men (Murphy, 2009). Among the top eight most active terrorist organizations, the Moro groups rank first in terms of casualties inflicted: from 1971 to 2013, they are responsible for the death of 75 people and 123 injuries from the nine attacks they perpetuated.

A variety of tactics are employed by the Moro groups in their attacks, such as bombing/ explosion (33.33%), armed assault (22.22%), and hostage taking (22.22%). For the Moro groups, bombing/explosion is by far the deadliest tactic, responsible for causing 60 deaths and 105 injuries, respectively, in two separate incidents that occurred in 2000 and 2003. The Moro groups attack mainly four types of targets: seafarers (22.22%), ports/terminals (22.22%), ferry/cruise vessels (22.22%), and fishing vessels (33.33%).

LTTE

Also worthy of close scrutiny is the LTTE, which is responsible for 81% of all attacks in Sri Lanka and 50% of all attacks in the South Asian region. The group claimed a total of 113 lives and wounded 26 people from 1971 to 2013. According to the GTD, during the past decade, the organization has conducted only four attacks: all against cargo/bulk carriers. For the LTTE, the most common attack type was bombing/explosion, which occurred during 67% of the attacks. Moreover, unlike other organizations, armed assault was never chosen as a tactic in any of the LTTE's attacks during the study period. The LTTE's use of explosives/bombs/dynamite is the highest among the top eight terrorist organizations, and the predominant target type chosen by the group is cargo or bulk carrier.

Since the organization's beginning in 1972, Raman (2004) states that the LTTE's maritime arm was one of its core resources. According to Raman, in 1984, the LTTE organized its naval assets and formed the Sea Tigers to counter the threat posed by the Sri Lankan Navy, which had inflicted heavy losses on Tamil craft used to maintain contact between

their base area across the Palk Strait in the Indian state of Tamil Nadu. From its beginning as merely a defensive force guarding the route between the base area and the front, the Sea Tigers developed into one of the most tactically sound and mature groups among all sea-borne terrorist organizations (Howland, 2004). It commanded sea supply and control routes, and conducted more complex operations such as amphibious support from the strait in northern Sri Lanka stretching down to Trincomalee. Bharadwaj (2000) and Raman (2004) contend that, by 1987, the organization had emerged as the dominant Tamil militant group, with the Jaffna peninsula and much of the east coast of Sri Lanka effectively under its control.

Research by Murphy (2009) shows that the Sea Tigers were equipped with patrol boats and armed trawlers and built their own suicide boats by modifying fishing trawlers and racing-style boats. In addition, the group built its own improvised naval mines. Murphy also documents that attack boats operated by the Sea Tigers were equipped with heavy machine guns, 23 mm cannon, as well as RPGs. This finding confirms Murphy's prediction regarding the types of weapons used by the LTTE to carry out its attacks: terrorist attacks perpetuated by the group disproportionately relied on explosives (67%), followed by firearms (24%). The group's use of explosives is more prevalent as compared with other groups, while its use of firearms is relatively less frequent.

Attack boats were often deployed together so as to enhance the likelihood of success. Similarly, suicide boats were usually deployed in groups of three, with suicide bombers on board each. The following case, taken from the GTD, provides a good illustration of a case involving multiple suicide boats and bombers in a single attack:[4]

> On October 30th 2001, *The Silk Pride*, a Sri Lankan Navy oil tanker, was the target of a suicide bomb attack by the Liberation Tigers of Tamil Eelam (LTTE). The attack, which occurred off Sri Lanka's Point Pedro, killed six people in addition to the four perpetrators who drove boats laden with explosives into the tanker. Two women were among the bombers. The LTTE admitted responsibility on their own radio station. Four other boats besides the suicide boat were used in the attack.

Chalk (2006) claims that there was even a decrease in recruitment in the Sri Lankan Navy, owing to the fear of being struck by one of these suicide craft. In terms of the size of the force of the Sea Tigers, one report estimates that, prior to the Boxing Day Tsunami (December 26, 2004) that struck the east coast of Sri Lanka, there were between 3,000 and 4,000 members. After this tragic event, a substantial portion of the Sea Tiger's boats and equipment were destroyed, and many of its supporters were killed. Nonetheless, the group insists that the tsunami did not wreck their navy because many of their key attack craft and weapons were stored in the jungle (Balachandran, 2005).

Abu Sayyaf Group (ASG)

A politically motivated organization that became active in the last decade in maritime terrorism in southern Philippines is the radical militant Abu Sayyaf Group (ASG). It is one of the factions that split from the MNLF in the early 1990s, and was headed by a former MNLF member Abdurajak Janjalani, who was a staunch believer in the notion of "Jihad." Since the 2000s, attacking maritime targets has become one of the core operations of the organization, as illustrated by the following notorious incident taken from the GTD:[5]

On February 27th 2004, a bomb consisting of eight pounds of TNT planted in a TV set by an Abu Sayyaf member caused a powerful explosion and large fire that destroyed the *Superferry 14* in Manila Bay about an hour after it left Manila, Philippines. The ferry was carrying 899 passengers and crew, 116 of whom were killed by the attack. Abu Sayyaf spokesman Abu Soliman and leader Khaddafy Janjalani claimed responsibility for the attack on behalf of the group.

Despite its relatively small size as compared with the Moro groups, the ASG took the lives of 117 individuals, and is responsible for 39 injuries. With regard to the distribution of attack types that the group employed, half of the total attacks are attributed to bombing/ explosions, while the other half are split between armed assault and kidnapping. Explosives/ bombs/dynamite and firearms are the predominant weapons used in carrying out attacks by the group. As for target types, the organization's favorites are ferries and cruise ships, and in fact these categories account for all of the casualties inflicted by the organization.

Another terrorist organization worth mentioning is the Shanti Bahini—Peace Force, which was formed in 1972 and abandoned terrorist violence in 1997 after signing a peace treaty with the government of Bangladesh. Compared with other terrorist organizations that had a maritime attack history spanning several decades, the Shanti Bahini—Peace Force's history of attack is relatively short. Despite the fact that the organization conducted only nine maritime attacks from 1988 to 1992, the casualties associated with these attacks rank second among all the maritime terrorist organizations in the GTD (after the Moro groups). The toll from these nine attacks is 103 dead, and 69 injuries. Regarding the attack type, armed assault, assassination, and bombing/explosion each makes up a third of all attacks by this group. Similar to other organizations, the weapons used by the Shanti Bahini—Peace Force are predominately explosives/bombs/dynamites, as well as firearms. More than half of the organization's attacks targeted ferries and cruise ships.

The bottom four of the top eight most active terrorist organizations—namely, the Shining Path (SL), National Liberation Army of Colombia (ELN), Movement for the Emancipation of the Niger Delta (MEND), and Revolutionary Armed Forces of Colombia (FARC)—committed 24 acts of maritime terrorism, and they are responsible for killing 50 individuals and wounding 23, though they are responsible for many fewer casualties as compared with the top four. In the African continent, half of all acts of terrorism committed by MEND are hostage taking (kidnapping) of seafarers. In South America, the three terrorist organizations responsible for the most casualties are ELN and FARC in Colombia, and SL in Peru, which add up to 74 attacks across the three organizations. Although they were very active in the 1980s, the ELN and SL have had no recorded acts of maritime terrorism since 1994.

Discussion and Conclusions

The threat of maritime terrorism is a long-standing challenge for governments and the transportation industry. However, due to limited data, little empirical research has been done to examine maritime terrorism in terms of casualties, weapons used, type of attack, targets, stability, and concentration patterns. There is also scant literature on the trajectories of terrorist attacks by organizations and within countries over time. This study helps fill the void by applying GBTA to uncover unobserved clusters of maritime terrorist groups and countries and estimate their developmental patterns. Two conclusions from the descriptive analysis need to be emphasized here.

First, in the five-trajectory group solution for the 63 terrorist groups, over 90% of terrorist groups are found to belong to "low decliners," with average attack counts hovering near zero. About 5% of all terrorist groups belong to "late risers," and they generate almost all of the volatility observed in average attack counts. Specifically, the "transient late risers" are responsible for about one third of all attacks, even though they only constitute 3% of all terrorist groups. The remaining terrorist organizations fall into the category of "transient decliners," responsible for carrying out about 10% of all attacks.

Second, in a separate GBTA descriptive analysis, a four-trajectory group solution was obtained for the 44 countries where at least one count of maritime terrorism occurred during the sampling period. Taken together, the "transient risers" and "transient late risers" constitute about 37% of all countries, and they are the locations for more than three-quarters of all attacks. On the other hand, even though the "minimal risers" constitute more than three-quarters of all countries, these countries are the locations for slightly less than one third of all attacks recorded. According to this analysis, the Philippines, Sri Lanka, Bangladesh, Nigeria, and Colombia can be labeled as the persistent global centers of maritime terrorist attacks. It was also found that the terrorist organizations based in these countries have been the most active.

In addition, the top four most active maritime terrorist organizations are identified, and they are located in the countries listed in the preceding text: the Moro groups, Shanti Bahini—Peace Force, ASG, and LTTE. On average, these four terrorist organizations are responsible for causing 40–50% of all maritime casualties during this period, and their share of casualties is quite stable over time. In particular, all casualties recorded during the years 1978, 1979, 1990, 1995, 2000, and 2003 are the sole result of attacks perpetuated by these four organizations. However, there are also years in which these four organizations are less active. For example, during the years 1976, 1982, 1984–1987, 1994, 2002, and 2008–2011, they did not cause a single casualty (although they did engage in hostage taking).

Notes

1 Seafarers consist of individuals who are sailors (captains and workers), passengers, and fishermen.
2 The GTD records the type of weapon used for each attack. The following definitions of each type of weapon are taken from START (2014). *Firearm* is defined as a "weapon which is capable of firing a projectile using an explosive charge as a propellant"; *explosives/bombs/dynamite* is defined as a "weapon composed of energetically unstable material undergoing rapid decomposition and releasing a pressure wave that causes physical damage to the surrounding environment"; *incendiary* is defined as a "weapon that is capable of catching fire, causing fire, or burning readily and produces intensely hot fire when exploded"; *melee* is defined as a "weapon—targeting people rather than property—that does not involve a projectile in which the user and target are in contact with it simultaneously"; *sabotage equipment* is defined as a "weapon that is used in the demolition or destruction of property"; and *other* is defined as a "weapon that has been identified but does not fit into one of the above categories."
3 There is only one terrorist group—Movement for the Emancipation of the Niger Delta (MEND)—in Group 1.
4 Retrieved from http://www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtdid=200110 300001
5 Retrieved from http://www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtdid=200402270002

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Part VII

Countering Terrorism

Empowering Communities to Prevent Violent Extremism: A Report on the August 2014 National Summit

Stevan Weine and William Braniff

In August 2014, the office of Community Oriented Policing Services (COPS) convened a National Summit on Empowering Communities to Prevent Violent Extremism. This chapter is based on the conference report from that summit.[1] The Countering Violent Extremism (CVE) movement is a work in progress beset by challenges and detractors, but demonstrating great potential to enhance public safety. This chapter discusses both the challenges and opportunities associated with the many ways that CVE is being interpreted and operationalized by local actors in their own communities.

Background on Countering Violent Extremism

In the aftermath of the surprise attacks against the United States on September 11, 2001, the US Government expanded military, law enforcement, and intelligence authorities in an attempt to increase awareness of potential threats and to thwart potential future surprises.[2] The magnitude of the death toll on 9/11 continues to cast a long shadow, heightening the perceived threat of violent Islamist attacks in the United States despite the relatively low frequency of successful attacks in the years since 2001, and the presence of more active violent ideological movements in the United States historically.

As the professional counterterrorism community gained greater capabilities and a better understanding of al-Qaeda-inspired terrorism, the US Government began to change its posture, moving from a singular focus on intelligence collection for the purposes of disrupting terrorist networks and plots, to a more preventative posture intended to reduce the number of individuals interested in engaging in extremist violence in the first place. This attempted reorientation of government efforts, from reactive to proactive, has been referred to as *countering violent extremism* (CVE), a change in vocabulary and behaviors from traditional counterterrorism.

The overall goal of CVE is "to stop those most at risk of radicalization from becoming terrorists" (US Government, 2010). Generally speaking, CVE is "a realm of policy, programs, and interventions designed to prevent individuals from engaging in violence associated with radical political, social, cultural, and religious ideologies and groups" (Holmer, 2013).

CVE in the United States is rooted in the 2011 White House *Strategic Implementation Plan for Empowering Local Partners to Prevent Violent Extremism in the United States* (SIP) (The White House, 2011a), and its antecedent, the *National Strategy for Empowering Local Partners to Prevent Violent Extremism* (The White House, 2011b). These policy documents outline a community-based approach, and the federal government's role in empowering local stakeholders to build resilience against violent extremism. They provide law enforcement and government officials with guidance in leveraging existing partnerships with community stakeholders and in other activities designed to help prevent violent extremism. The SIP underlined that partnerships with community-based organizations are necessary to respond to community concerns and to support community-based solutions.

The US CVE *National Strategy* has the following priorities:

1. Building safe, secure, resilient, crime-resistant communities
2. Training, information sharing, and adopting community-oriented policing approaches
3. Applying community-oriented policing practices that focus on building partnerships between law enforcement and communities
4. Fostering community-led preventative programming to build resilience against violent extremist radicalization (such as those that attempt to counter extremist ideology through education, dialogue, and counseling)

The federal government's approach to CVE assumes that communities are a key component to preventing and intervening to stop violent extremism. Within communities reside traditions, relations, values, norms, groups, and institutions that already mitigate violent extremism. Stated in other terms, the community has resilient properties—or protective resources—that help to protect the community and its members against various kinds of adversities and threats. This implies that building resilience for the purpose of CVE is in part about enhancing or strengthening those existing properties and resources and about jump-starting weak or nonexistent ones. All of this is part of what scholars mean when they write about empowering communities (Griffith et al., 2008; WHO, 2009), and these concepts are critical to successful CVE engagement and partnership activities.

Empowerment refers to the process of increasing the capacities of individuals or groups to make choices and transform those choices into desired actions and outcomes (Yoo et al., 2009). Empowerment centers on how the community looks at community development and mobilization in terms of its key needs, strengths, and meanings. Empowerment activities may include providing training or aligning resources to increase capacities, especially for community-based organizations that lack them. Empowerment can also include bringing new people to the table where decisions are made. This chapter includes discussion about how law enforcement, government, and communities are approaching the issue of empowerment with respect to CVE.

Background on the National Summit

The goal of the National Summit on Empowering Communities to Prevent Violent Extremism was to advance multidisciplinary efforts to implement effective community-based CVE intervention models and create a community of interest that will continually improve upon those efforts. The summit reflected the federal government's role in supporting locally led efforts to create and implement sustainable, multidisciplinary, whole-of-community, and information-driven grassroots efforts to counter violent extremism. Given that CVE

strategies are still emerging in the United States and globally, the summit aimed to explore how key US localities and several other countries are approaching CVE, including lessons learned, best practices, and challenges.

To facilitate manageable discussion and clear outcomes, the summit planning team focused the scope of this summit on violent extremism that could occur within the United States. This enabled summit participants to focus on the institutions, roles, and processes in place in the United States that can contribute to prevention. In addition, the summit was not limited to any particular ideological motivations or groups.

Summit participants included federal, state and local, international, and nongovernmental entities engaged in CVE efforts. The federal government's approach to CVE focuses on empowering local communities to prevent violent extremism by recognizing warning signs, assessing risk, and using existing tools to mitigate threats. Several communities in the United States are already engaged in extensive CVE efforts. Thus, the summit brought together delegations from five of these communities, including Dearborn, Michigan; Boston, Massachusetts; Minneapolis-St. Paul, Minnesota; Los Angeles, California; and Montgomery County, Maryland.

While law enforcement organizations are well positioned to participate in these activities because of their frequent interactions with communities, professionals from other disciplines such as mental health, social work, religion, and education are ideal candidates for participation in CVE efforts. Thus, the delegations comprised not only law enforcement representatives but also community-level stakeholders from a cross-section of sectors and disciplines. In addition, the delegations included proactive community activists and youth leaders who have become role models and ombudsmen for their respective communities and constructive partners for the practitioners engaging in CVE efforts.

In addition, the summit aimed to showcase best practices from several other democratic countries engaged in CVE efforts. Representatives from Australia, Germany, and Canada participated in the summit.

Key stakeholders from DHS and DOJ, including CVE working group members and representatives from public policy offices engaged in CVE efforts also participated in the summit, primarily to listen to the testimonials and concerns voiced by the delegations and also for the purpose of addressing how current efforts throughout the United States align with the national strategy. These stakeholders help establish funding priorities for CVE-related research and grants, disseminate lessons learned to other cities, ensure that CVE efforts do strengthen civil rights and civil liberties in the United States, and engage in inter-agency and international dialogue on CVE-related matters. Therefore, their presence at the summit helped ensure that the experiential knowledge of the delegations could inform CVE policy and practice more broadly.

Reporting on the Summit

The recommendations included in this chapter reflect the major themes that emerged, focusing on those that the majority of participants appeared to support. The following discussion points reflect the participants' debate and dialogue throughout the 2-day event.

Addressing the problem of violent extremism in the pre-criminal space through engagement, prevention, and intervention programs is a departure for traditional law enforcement and a responsibility that the public has recently articulated for communities and other government organizations. In order for government, law enforcement, and communities to succeed in countering violent extremism, each must undergo paradigm shifts to new

frameworks that emphasize using collaborative and multidisciplinary strategies to build community-based, multilevel prevention and intervention programs. The delegations that presented at the summit have already begun to make these shifts.

The first paradigm shift is the recognition by law enforcement organizations that CVE approaches offer pragmatic and proactive opportunities when dealing with the issue of violent extremism, as law enforcement cannot "arrest their way out of the problem," and both resource constraints and constitutional protections of civil rights can make it problematic for police officers to monitor the pre-criminal space of radicalization to violence. By comparison, CVE approaches help build trust and open lines of communication with the communities that police departments protect and serve, enlisting their help to identify and assist at-risk individuals. Summit participants observed that law enforcement organizations should not only build relationships with communities specifically related to CVE efforts but should also intervene on other issues, because such intervention may create the kind of trusting relationship necessary for effective police–community relations on CVE efforts. The Minneapolis-St. Paul delegation, for instance, noted that:

> If it wasn't for law enforcement, nobody would have reached out to this community. Zero. So we were the ones. … At the beginning I thought it was not going to work because I would go into our housing complexes where Somali youth and elders were residing and nobody wanted to talk to us, didn't want to come to our meetings … my officers do as much social work today—I never thought when I signed up for this I would be doing social work, intervention and prevention initiatives. I think that's where the dollars should be going, not toward enforcement. That's what we've had to do. We stopped a sexual trafficking case. It was a terrible case. The reason I bring that up is that a woman in a Somali community told us that because of a partnership. We didn't realize this was happening because nobody would come forward because they didn't know if they could trust us. That led to 30 indictments.

The second paradigm shift is the recognition that, while the law enforcement community has an important role to play, that role should ultimately be in support of communities and other governmental organizations. Summit participants noted that, while it may be necessary for law enforcement to initiate CVE efforts, other community entities may be best suited to fully implement cross-disciplinary approaches, as much CVE programming occurs in the pre-criminal space and will use abilities that are not organic to most law enforcement organizations. The Los Angeles delegation commented that:

> In the beginning we had to always be out front, as we were the most symbolic form of government—in uniform 24 hours a day. Today it has evolved to where police can still be there in a support role and let these other things take hold.

The third paradigm shift is the recognition that countering violent extremism requires a broad array of capabilities and participants dedicated to building resilience at many levels of society simultaneously. By building more partnerships involving individuals, families, communities, and various government agencies, communities ultimately become more resilient to all hazards, including but not limited to violent extremism. One federal participant, for example, stated that:

> We want [to build] relationships because they will reduce issues of crime and violence. It has to be about strengthening local communities. I don't think you abandon the CVE title, but put it in context as one of the threats you face.

Summit Recommendations

The summit planners organized the participants' recommendations according to the kinds of organizations responsible for implementing them. To be specific, the summit planners identified three major categories of organizations positioned to implement these recommendations: (1) law enforcement, (2) other government,[3] and (3) community-based.[4] The recommendations center on strengthening family, community, and institutional defenses that will mitigate the risks for violent extremism.

To be clear, these recommendations are not prescriptive; they are experience-based recommendations that the participants felt others should follow if they are seeking to obtain the best CVE-related outcomes.

Law Enforcement–focused

- *Law enforcement organizations should prioritize building and strengthening mutual trust between themselves and the communities they serve.*

    Summit participants discussed building and strengthening mutual trust between law enforcement and community organizations more than any other single issue. There was consensus that law enforcement and communities should establish a high degree of mutual trust before they can have productive conversations about issues such as radicalization and violent extremism. Participants drew from their own experiences to share some helpful strategies. As a member of the Montgomery County delegation stated, "The communities that need us the most often trust us the least."

    - The Minneapolis-St. Paul, Boston, and Los Angeles delegations highlighted the importance of communicating success stories from within the community via trainings and in-services to help make law enforcement officers aware of the positive achievements and contributions occurring in the community. As law enforcement officers are regularly exposed to examples of criminality, this helps provide a more balanced view of the communities in which they work, enhancing trust.

    - The Los Angeles and Montgomery County, Maryland, delegations highlighted the importance of transparent policies and practices for redress when law enforcement organizations make mistakes.

    - The Dearborn, Michigan, delegation stressed the importance of ensuring that the use-of-force and surveillance policies are up to date to avoid the potential erosion of trust that can occur between law enforcement and communities due to perceived abuses of power.

    - The Montgomery County delegation discussed how their faith communities collaborate to develop law enforcement training regarding CVE. Similarly, the Boston delegation cited how the police department brings community representatives who work with law enforcement on CVE issues into training academies to deliver and receive trainings to increase mutual familiarity and trust.

    - The Minneapolis-St. Paul delegation highlighted the use of citizen academies and youth academies focusing on the roles and responsibilities of the police force, as well as youth summits focused on relevant issues, to enhance transparency and dialogue.

    - The Los Angeles and Boston delegations stressed the importance of separating their community outreach efforts from their intelligence-gathering efforts entirely,

recognizing that using engagement activities to advance specific investigations could erode trust quickly.

○ Every delegation discussed the need to build trust prior to an incident occurring, typically through consistent engagement over time, because trust is difficult to establish after a violent extremist incident or arrest has occurred.

○ The Australian delegation stated that, based on their experience, increased trust leads to greater input from the community regarding prevention, intervention, and disruption efforts.

The Boston delegation noted that: "After the bombings we were inundated with support from the communities. That was a testament to our relationship with our community members. To plan the next marathon, we knew it was going to be highly restrictive. Getting information out to everyone affected by the new plan and heightened security, using social media and the traditional media—everyone was incredibly cooperative and understanding."

• *To engage with communities, law enforcement organizations should be engaged with and responsive to community organizations and advocates consistently and over time.*

Summit participants gave many examples that testified to the importance of ongoing commitments to build relationships with community leaders and groups. Engagement is certainly not a one-off event. Summit participants observed that, in many cases, law enforcement interacted with communities more than any other government agency.

○ While each of the delegations stressed that key leaders must be visible participants and champions of community engagement, the Los Angeles, Boston, and Minneapolis-St. Paul delegations also stressed the importance of community policing models in which senior officers are present in, familiar with, and responsive to their assigned communities on a routine basis. In Minneapolis-St. Paul, community engagement teams fulfill this role, while captains lead such efforts in Boston.

○ The Montgomery County delegation stressed the importance of following up on routine matters, such as complaints or tips from the community, as a way to build performance legitimacy.

○ The Minneapolis-St. Paul and Montgomery County delegations stated that it is important to try to answer questions from the community on the first phone call, without giving the caller the runaround.

• *Communication with a wide range of community partners on a broad range of topics should be part of the routine operations of law enforcement.*

Summit participants emphasized the importance of information sharing and open dialogue for advancing CVE efforts. Through proactive communication practices, law enforcement and other government agencies can enhance their transparency, which would help build trust. The Minneapolis-St. Paul delegation noted that "We take the criticism also. I think it's a good conduit for people to express their opinions on what the police department is doing."

○ Each of the delegations' law enforcement representatives discussed about using social media to increase the reach and frequency of their interactions with communities and to communicate positive messages about their organization and its role in the community. There was also a discussion about how social media platforms can provide a forum for communities to voice their concerns.

- The Boston Police Department representative emphasized the pragmatic value of social media platforms, which allowed them to quickly address rumors and incorrect information in the aftermath of the 2013 Boston Marathon bombing.
- The Minneapolis Police Department produces a community engagement newsletter, which it sends by email to a large number of recipients.
- Several of the delegations' law enforcement representatives stated that they hired individuals with communications or media backgrounds to lead their social media efforts.
  - The Los Angeles delegation discussed its Youth Advisory Council, which meets monthly with police to discuss programming geared specifically to 18–30-year-olds.
  - The Dearborn delegation discussed various occasions in which the police asked a broad cross-section of the community for help on urgent security issues, and about the community responding positively.

The Dearborn delegation commented that: "When we have crime trends, we send out bulletins in two or three languages to homes and schools. We've had great results—whatever crime we have—we inform the community. There was a K2 [bath salts] epidemic in our county a few years ago. Several people died in the county from using it. I called the superintendent; he said, "I support you." We convinced the entire community to take that stuff off the shelves in gas stations and convenience stores—no pushback. I had no expectation of what success would look like. We passed a city ordinance that equally outlawed it and made it a seven-year felony. It worked and became a state law; in 14 days it was on the governor's desk. We got all that stuff off the shelves in Dearborn before the rest of the state. I must have sent out 400 letters—every church, school principal, chamber, etc. You have to keep citizens engaged on every front … you can do tremendous things if people are allowed the opportunity."

- *Law enforcement organizations should focus prevention and intervention activities on behaviors, not on racial, religious, or ethnic identities.*

  Summit participants agreed that the focus of CVE activities should be on violent extremist behaviors and not on identities. The participants felt that focusing on one ethnic or religious community can stigmatize that community and generate push back on CVE efforts. Several summit participants also voiced the concern that researchers and practitioners have not yet established reliable behavioral indicators of radicalization to violence, which would be more useful for CVE purposes than merely focusing on suspicious behaviors associated with mobilization—planning or executing a terrorist attack.
  - The Minneapolis-St. Paul delegation used an Urban Area Security Initiative grant to develop a community awareness program that focuses on recognizing suspicious behavior. They trained approximately 3,000 community volunteers on eight suspicious behaviors associated with terrorist attacks to help secure the Major League Baseball All-Star Game.
  - The delegations also emphasized being as inclusive as possible of different communities as another way to avoid stigmatizing any particular community. Dearborn maintains a local CVE working group with members from the law enforcement community, the media, faith-based groups, and schools. "If we have a meeting, we invite everyone. Whatever programming we put on in the east end, we do the same for the rest of the city."

○ All of the delegations highlighted the importance of objective and credible training on CVE-related issues for law enforcement and other government organizations. In contrast, they discussed the "cottage industry" of training providers that offer counterproductive and biased curricula, especially regarding specific religious and ethnic groups.

- *Law enforcement organizations should collaboratively develop and evaluate multilevel prevention and intervention programs.*

  Summit participants agreed that engagement and partnership between law enforcement and communities are necessary but not sufficient to build individual, family, community, and institutional defenses that mitigate the multilevel risks for violent extremism. Thus, efforts to mitigate risks must consider multiple levels where risks can exist, including the individual, interpersonal, family, community, and organizational levels. Therefore, communities and law enforcement organizations must eventually develop multilevel prevention and intervention programs. Summit participants endorsed program evaluation efforts that are also multilevel (focused on indicators in two or more realms such as community, organizational, sociocultural, family, mental health, etc.) and that incorporate both qualitative and quantitative methods. Summit participants discussed several examples of existing evaluation efforts, but emphasized that more resources are needed to support evaluation.

  ○ The Montgomery County program uses pre- and post-intervention measures to assess program impact and is also undergoing a National Institute of Justice-sponsored evaluation of its CVE program.
  ○ The Canadian delegation gives surveys to participants after certain engagement events and uses the results to devise new action plans with the community.
  ○ The Australian government has funded a university-based research panel to host workshops and generate objective research relevant to CVE efforts. This effort has resulted in a website, Resilient Communities (http://www.resilientcommunities.gov.au/pages/home.aspx), which serves as a clearinghouse for this content.

Other Government Agency-focused

- *Government agencies' CVE efforts should aim to increase the civic engagement among impacted communities and to build the capacity of community-based organizations.*

  Summit participants acknowledged that many, though not all, communities where CVE is a focus are communities that face significant social and economic adversity. They did not argue that underlying conditions such as poverty or poor governance cause violent extremism, but they did agree that CVE efforts could not be most effective without addressing these needs as well, for two reasons. In addition to the fact that extremist recruiters and ideologues exploit local grievances and conditions, it is difficult for communities to develop capacities when they have limited resources or are focused on more immediate needs. Communities will focus their finite capacity on more pressing issues. Summit participants recognized that ameliorating broader social, economic, and structural problems is beyond the scope of current CVE programs, though they did stress the importance of working with underserved communities—especially immigrant and refugee communities, who frequently face these and other challenges—to promote their civic engagement and to build the capacities of their community-based organizations. While summit participants widely supported making government services available to

underserved communities, one delegation stressed that the goal should be to foster empowerment, and cautioned that it is important to avoid contributing to a victim-focused identity in communities.

○ The Montgomery County and Boston delegations stressed the importance of serving newer immigrant communities that may not benefit from existing programming geared toward more established racial and ethnic communities with different needs, such as Hispanic or African-American communities. In Montgomery County, the World Organization for Research, Development, and Education (WORDE) Crossroads programs, funded by the Office of the County Executive, provide a model that other counties can adopt (WORDE, 2015). They were established in order to provide social services and counseling to populations dramatically underserved by other county programs, primarily because existing service organizations did not have the cultural competencies to serve those communities.

○ In Montgomery County, the Department of Health and Human Services maintains a network of more than 500 nonprofit community-led organizations. When a new need is identified, the county executive identifies a community-led organization to take the lead because this is typically less expensive and more responsive to the need than developing the capacity inside the government. The county executive allocates a significant portion of the county's budget for this purpose.

○ Germany has embraced the idea of using competitions to highlight local projects that demonstrate potential for success. These contests help spread good ideas, connect local actors, support promising efforts financially, and empower local leaders. The German delegation cited one example of an interfaith nongovernmental organization (NGO) based in Berlin, Kiezbezogener Netzwerkaufbau, which has worked to improve the condition of an underprivileged community (Kiezbezogener Netzwerkaufbau, 2015).

• *Government agencies' approaches to CVE should be based on sustained, collaborative partnerships with communities.*

Summit participants agreed that the government approach to CVE should be based on sustained, collaborative partnerships with communities. They expressed the ineffectiveness of developing CVE programs in isolation and then handing them off to communities with no further support or participation. Instead, summit participants believe that, when government agencies engage in CVE programming, they should develop programs in partnership with communities or provide support to community organizations developing them on their own. Government should aim to empower communities on a broad front rather than treating communities as merely an audience for their programs—especially narrowly focused national security programs that run the risk of creating a perception that the government is deemphasizing the concerns of the community.

○ The Montgomery County model is not law-enforcement-centric, and is community-led. It was started by WORDE in partnership with the Office of the County Executive and the Montgomery County Police Department. It does much of its work through its Office of Community Partnerships, as well as a network of community-led NGOs and the police.

○ Most of the delegations mentioned the value of community advisory boards that convene regularly to engage with local government and stressed how important it is for those boards to include representatives from a cross-section of the community.

○   The Canadian delegation described an innovative community engagement and awareness program, called Storytelling, which uses first-person radicalization narratives (stories) to highlight moments when friends, family, and community members could have intervened. The community selects which stories will be read from a menu of narratives, selects a location for the event, and invites the attendees. The government representatives and a community member facilitate a conversation focused on how the community members can be empowered to conduct an intervention. Based on this discussion, the government then follows up to help the community develop prevention and intervention tools. The delegation stressed the importance of a strong relationship between the government and community before engaging in a program such as Storytelling, as the emotional nature of the narratives can provoke heated discussions.

The Canadian delegation noted that: "The community member will bring the government representative out and have that representative confirm that there's no recording going on, that this is a safe space where people can feel comfortable saying what they're saying. We'll make them say this in front of everyone to give a sense of confidence to attendees that you can be honest here. There are no negative repercussions."

- *Government agencies should better leverage the contributions that other sectors, such as mental health and education, can make to CVE.*

Summit participants perceived violent extremism and the efforts to counter it as multidimensional problems that require multidisciplinary solutions. Summit participants noted that government is in a position to bring other individuals and organizations from various disciplines together to identify assets that could contribute to CVE. In addition, they noted that government should be responsive to the needs of its communities and ensure access for persons who require government services, such as health and mental health, even if those services do not appear to be directly related to CVE.

Summit participants also discussed the potential or perceived limitations of the mental health and educational communities in sharing health- and education-related information with the law enforcement community. The summit illuminated the need for increased understanding on the part of law enforcement, educational, and other practitioners regarding when it is permissible or mandatory to divulge information. The summit planners support increased training and awareness of these laws, specifically the Health Insurance Portability and Accountability Act and the Family Educational Rights and Privacy Act.

○   The Boston delegation described the importance of mental health and educational services for at-risk individuals, such as immigrant youth who experienced trauma prior to or during their departure from their countries of origin.

○   The delegations noted that it was important to enable other civilian and government agencies to step forward and take the lead in areas where they have specific capabilities, such as those involving recreation, education, housing, or jobs.

   ■   The Minneapolis-St. Paul delegation mentioned that they were featured on CNN a year earlier for working with the local YMCA to provide a culturally specific swimming program accessible to young Somali–American women.

   ■   The Boston delegation discussed the need to partner with hospitals and the Boston Public Health Commission to provide families with "wrap-around services" that the police department cannot provide.

○ Dearborn is rolling out a Law Enforcement Mental Health Intervention model that focuses on curbing violence by leveraging mental health professionals within a framework that respects their capabilities and limitations.

○ In Dearborn, the school superintendent is a co-leader of CVE efforts, and schools are major partners to law enforcement. The school system involves parents, students, and law enforcement in tabletop exercises around school security issues to build trust and familiarity prior to an incident occurring, and to minimize the negative impacts if a crisis does occur.

The Dearborn delegation noted that: "Some may be surprised to see schools here, but [the] chief and I can tell you incident upon incident we've been able to head off by building trust with our students. Police don't just build trust with adults, but build trust with kids in high schools and elementary schools and have headed off incidents because of those relationships."

- *Government agencies' CVE programs and policies should be based upon both best practices and scientific evidence.*

Summit participants' current activities were more focused on program development and implementation than on evaluation or measurement. Summit participants stated that there is little to no formal evaluation of CVE programs in their communities, explaining that they do not have the expertise or resources to conduct such evaluations. Some described limited partnerships with university-based academics around the issues of evaluation and measurement. However, participants described the importance of building not only best practices but also scientific evidence of program impacts. START leadership discussed how having evaluation metrics of CVE programs is important for deriving best practices and for allocating resources within organizations and at the county, state, and federal levels of government. Summit delegates discussed a strategy whereby law enforcement, government, and community CVE programs might partner with university-based academics to collaborate on evaluation projects. Participants observed that demonstrating evidence of the effectiveness of CVE programs is a key to long-term sustainability, and should therefore be a priority from the onset. Summit participants discussed how they have begun to do this:

○ The Minneapolis-St. Paul delegation is working with the Bureau of Justice Assistance and the Police Executive Research Forum to conduct a study of community perceptions that aims to better understand and increase community trust in law enforcement officers.

○ Montgomery County uses a set of pre- and post-intervention quantitative and qualitative evaluative tools to measure the effectiveness of their preventative interventions. Some of the scales are validated from other studies measuring stress or anger management behavior. Others tools are experimental but based on studies conducted in concert with the University of Maryland. Montgomery County is also undergoing an NIJ-sponsored evaluation of its CVE program.

○ In Montgomery County, WORDE conducts much of its CVE-related training based on the most up-to-date science-based research, including training on its unique risk factors of radicalization cluster model and other CVE-relevant training on topics such as acculturation-related stress and trauma. The delegation described how they examine prior case studies of radicalization to better understand potential opportunities for intervention.

○ FLETC leadership stated that continued research is needed in revising and validating curriculums used to train law enforcement on their role in CVE.

Community-focused

- *Communities should advocate for a multicultural approach to working with law enforcement and other government agencies that includes not just one ethnic or religious group and that aims to build capacities and increase civic engagement.*

    Summit participants acknowledged that it was best not to focus CVE efforts on any one ethnic, racial, or religious group. Rather, it was best to be inclusive of multiple such groups in order to avoid the potential for stigmatization. Summit participants also emphasized that adapting a multicultural approach would help to ensure that CVE efforts were focused on individual behaviors rather than group identity, which raises constitutional concerns. Summit participants also stated that a multicultural approach helps to build community capacity and increase integration and civic engagement.

    - The delegations noted that multicultural dialogue can facilitate learning, citing how newer immigrant and refugee communities can learn lessons from the experiences of prior immigrant and refugee communities in terms of cooperation with law enforcement and government. The Minneapolis-St. Paul delegation stated that their experience in engaging with the Hmong community helped to inform and enrich more recent experiences regarding the Somali community.

    - Dearborn has an interfaith community that meets regularly and that also engages in an interfaith tabletop exercise. These exercises help community institutions and individual community members build the lines of communication that allows them to head off crises.

    - When the Los Angeles team conducted a news conference, they brought representatives from multiple ethnic and religious groups so that the focus was not on any one group and the emphasis was on multi-ethnic and interfaith solidarity.

    - The Minneapolis-St. Paul delegation discussed how the Somali community works with other minority communities on issues of mutual concern, such as health care, community service, and immigration.

- *Communities should advocate for partnerships with law enforcement that encompass a range of public safety issues that include CVE as well as other issues such as domestic violence, child abuse, human trafficking, and gang violence.*

    Summit participants debated whether it was best to focus exclusively on CVE or whether it was better to integrate CVE with addressing other public safety concerns. Summit participants widely agreed that there are advantages to integrating CVE with other public safety concerns. They observed that this type of broader approach is less likely to lead communities to feel targeted in a potentially discriminatory way. In addition, this kind of approach is more likely to engage the interests of a broader range of community partners.

    Communities can perceive the very use of the term *violent extremism* as a derisive label. Some community advocates argue that the media is exaggerating the actual risk of extremism, and more importantly the movement from extreme beliefs to violent extremist behavior. For CVE practitioners, these disagreements about such terms have come to mean that, in their discourse with community partners, they tend to avoid using the terms *violent extremism* and *CVE*, so as not to put off community members and potential partners.

    - The Los Angeles delegation stated that engagement should be purposeful and address what the community perceives as its needs in order to be effective. For example, they

learned that the communities' priorities were integration, bullying, bias, and hate crime. This led to the formation of an anti-bullying and bias coalition, which demonstrated the responsiveness of the law enforcement community and helped to engender trust.

○ The Office of Community Partnerships in Montgomery County maintains three working groups, including the Faith Community Working Group. This interfaith working group does not focus exclusively on violent extremism but instead on working with their broader communities to mitigate all hazards. This approach helps to depoliticize CVE-related issues while increasing the community's capacity to deal with those issues through habitual collaboration and dialogue.

- *Communities should advocate for community policing approaches for engaging with their community on matters of CVE and other pertinent issues.*

   Summit participants strongly endorsed the significance of community policing approaches to building CVE programs. They observed that communities embrace community policing; however, summit participants perceived a need to clarify and update what exactly community policing means in the context of CVE. Traditionally, community policing combines traditional aspects of law enforcement with prevention, problem solving, community engagement, and partnerships. Community policing in the context of CVE draws upon that tradition but makes modifications and additions that address CVE issues. Modifications may include creating special units with different expertise than typical community liaison units, such as expertise on radicalization and violent extremism, greater or more specific cultural competency, greater familiarity with mental health concerns such as post-traumatic stress disorder, or specific knowledge regarding grants or other government resources available to support community-led intervention or prevention programming. Several delegations emphasized the importance of community policing to their CVE efforts:

○ The Los Angeles delegation stated that it was important for CVE never to lose its roots in community policing, suggesting that communities should know that their voices will be heard without having to speak directly to the highest-ranking officers in the police department.

○ The Boston delegation stated that community policing is "in their DNA" and that it was fundamental to their approach to CVE.

- *Community leaders and organizations should work with law enforcement to develop procedures for non-punitive ways of helping people who are in the pre-criminal space of radicalization and recruitment.*

   Summit participants shared information on how local, state, and federal law enforcement and communities are finding ways to help steer persons away from violent extremism that do not involve criminal arrest and prosecution. However, they indicated that more work needs to be done in this area.

   Participants debated whether, or in what circumstances, communities leading these efforts should involve law enforcement. They recognized that there were both advantages and disadvantages in having law enforcement involved. Advantages include protecting the community from legal risks or assuming liability when dealing with an at-risk individual. Disadvantages include creating a chilling effect on communities' willingness to conduct an intervention in the first place, for fear it may result in an unnecessary investigation or arrest.

○ The Minneapolis-St. Paul delegation explained that when a law enforcement officer is told "I'm worried about this person," police officers who are well trusted in the

community, such as community liaison officers, will speak with the young person's parents before taking any other action.

○ The Los Angeles delegation and the Montgomery County delegation stated that standardized and transparent protocols are important to help establish clear lanes of responsibility between community organizations and law enforcement organizations regarding interventions. However, at present, these protocols are often lacking.

○ In 2012, the German government established the Radicalization Advisory Center, which provides professional advice free of charge to those who call or email the hotline with concerns that someone they know may be radicalizing. Each case is handled on a case-by-case basis; the goal is to develop strategies with the person seeking help. If there is the need for more extensive counseling, the Radicalization Advisory Center refers those callers to a network of NGOs and state and local resources.

○ In Montgomery County, the local government funds WORDE's intervention program, which was set up to provide specialized care to individuals who are vulnerable to recruitment into violent extremism. The Montgomery County delegation communicated that their Faith Community Working Group plays a valuable role in addressing militant ideologies when an intervention team determines that ideological factors are playing a significant role in an individual's radicalization.

○ Many delegations discussed the importance of multidisciplinary intervention teams.

• *Community organizations should build community-led CVE initiatives either independently or in partnership with law enforcement, government, or private institutions.*

Summit participants shared several community-led CVE activities they are implementing and strongly endorsed developing more of these activities. Summit participants recommended that communities themselves take the lead on multiple elements of CVE. For example, they observed that community-based organizations should take a leading role in counter-narrative campaigns, making more extensive use of social media to communicate with the public. In addition, they noted that community-based organizations should seek partnerships with law enforcement and government organizations that address underserved needs and increase human services, especially regarding youth and families, to help foster trust in government and the resilience of communities. Summit participants also contended that communities are in the best position to build programs and campaigns that give parents better knowledge, skills, and awareness of violent extremism risk and protection. Last, communities may be able to help law enforcement to understand how to better connect with difficult-to-reach subgroups. Summit participants expressed that communities must have meaningful and ongoing input into CVE programs and policies, and that community strengthening should be fundamental to CVE.

• The Los Angeles delegation stated that a division of labor between community and law enforcement was helpful because, when community members talk with fellow community members about certain CVE issues, they have much more credibility than a government representative.

• The Montgomery County delegation discussed how an NGO leads their intervention program, but it coordinates and works in partnership with the various governmental organizations that provide CVE-relevant services to communities.

- Several youth organizations from Minneapolis-St. Paul, such as Ka Joog, take a leading role in prevention programming, involving youth in skill-building programming and in using the creative arts to help young people express themselves in positive ways (Ka Joog, 2014). Some of these groups have then partnered with law enforcement and government organizations to create internship programs.
- Participants from the Los Angeles delegation described the Safe Spaces intervention model, created by the Muslim Public Affairs Council (MPAC, 2014). This model involves crisis intervention teams comprising community members. These community-led intervention teams decide if they are comfortable including a member of the law enforcement community in their team. The program calls for the use of tabletop exercises to prepare the intervention teams to engage with individuals who are engaging with extremist ideas but who have not yet engaged in extremist criminal behavior. This training is similar to training exercises used by offices within the DHS to train communities on how to respond to other hazards, and provides an opportunity for collaboration in the future.

The Year Following the Summit

In the year following the summit, further steps were taken to advance CVE in many of the aforementioned areas of emphasis.

The White House held a CVE Summit, in February 2015, in which a significant portion of the agenda focused on domestic CVE issues. Representatives from the three CVE "pilot cities" of Greater Boston, Los Angeles, and Minneapolis-St. Paul discussed the CVE frameworks created in part through federal support of their respective pilot programs, as well as their related achievements, plans, and perceived challenges (The White House, 2015).

One area of emphasis discussed at the White House summit was the need to further expand CVE initiatives beyond engagement and partnership and to include targeted prevention and intervention programs that involved community-based providers working in coordination with law enforcement.

Although the SIP made no mention of interventions, having been much more focused on engagement and prevention, the persistent and growing threat of homegrown violent extremism posed by the so-called Islamic State has served to drive the call for developing interventions.

Acknowledging that there was no existing model for interventions, a Best Practices for Targeted Violence Interventions Summit was held in Chicago in September 2015 so as to develop an intervention model, which brought together key law enforcement, other governmental, community, and academic partners.

A second area of emphasis discussed at the White House was the need for CVE to go beyond law enforcement and to actively engage mental health professionals, education professionals, and other community-based service providers. For example, at the White House Summit, Vice President Biden called for mobilizing "mental health resources" to stop persons from becoming violent extremists. The Science and Technology Division of the US Department of Homeland Security has funded new research that demonstrated how mental health and education professionals can uniquely contribute to CVE through both direct involvement, indirect support, and best practices.

A third area of emphasis was the need for evaluation and assessment of CVE programs. In August 2015, the Department of Homeland Security put out a call for proposals to

conduct program evaluations of the CVE Pilot Cities initiatives. Similarly, the National Institute of Justice has funded research on CVE evaluation and assessment. This research will inform how CVE programs need to be changed, what aspects are worthy of implementation in these and other US cities, what are desirable and undesirable unintended outcomes of those initiatives, and how to best safeguard civil liberties.

Notes

1   This report is titled *Report on the National Summit for Empowering Communities to Prevent Violent Extremism*; it was released by the Office of Community Oriented Policing Services Office (COPS) of the US Department of Justice, and made possible through a research grant from the COPS office. The introduction and conclusion sections of this chapter were edited for this publication, but the body of the chapter is unchanged from that original report, available at http://ric-zai-inc.com/Publications/cops-p326-pub.pdf. The opinions contained herein are those of the author(s) and do not necessarily represent the official position or policies of the US Department of Justice. References to specific agencies, companies, products, or services should not be considered an endorsement by the author(s) or the US Department of Justice. Rather, the references are illustrations to supplement discussion of the issues.
2   This expansion of authorities included passing of the Authorization for the Use of Military Force legislation, giving the president authority to deploy military force against those responsible for the 9/11 attacks; passing of the USA Patriot Act, reducing obstacles in intelligence collection and dissemination; and eventually the release of an update to the FBI's Domestic Investigations and Operations Guide, which lowered the threshold for the FBI to do assessments of individuals and local communities so that field offices could increase their situational awareness, better placing them to recognize a potential threat. Many of these initiatives have raised civil rights and civil liberties concerns.
3   *Other government organization* or *other government agency* refers to any non-law-enforcement agency from federal, state, local, or tribal government participating in a CVE-related activity. Common examples include local departments of health and human services, departments of education, and offices of county executives. While law enforcement organizations have often taken a leading role in CVE efforts, several of the participating delegations stressed the importance of having law enforcement play a supporting role to that of other government agencies and communities.
4   For purposes of the summit, the planners used the term *communities* to refer to any individual or group acting outside of formal employment by federal, state, local, or tribal government. For example, it may refer to student groups, NGOs, interfaith groups, sports clubs, or individual community members active in civil society.

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Terrorist Plots the United States: What We have Really Faced, and How We Might Best Defend Against It

Kevin J. Strom, John S. Hollywood, and Mark W. Pope

Introduction

More than a decade has passed since the terror attacks of September 11, 2001, and the nature of the terrorist threat against the United States homeland continues to evolve. The passage of time, however, provides an opportunity to empirically examine terror plots against the United States, because there are more data points to include for analysis. The focus of this chapter is to help the reader understand better the true nature of the terrorism threat that the United States has faced over the last almost 20 years, as well as what measures have been most effective at identifying and stopping terrorist plots before they are executed. Specifically, we analyze 150 executed and foiled plots, for all ideologies/motivations, against the US homeland over a 14-year period (1995–2012) to address four topics of interest to researchers, policymakers, practitioners, and the general public: (1) whether the American public is safer from terrorist attacks today than a decade ago, (2) what the terrorism landscape is like and what its relative threat is, (3) what types of information and activities have led to foiling plots, and (4) when plots did reach execution, what, if anything, went wrong with counterterrorism efforts.

Previous research on terrorism has largely focused on the characteristics, motivations, and ideologies associated with completed or successful terrorist attacks. For example, the Global Terrorism Database (GTD), a major repository for information on terrorist events maintained by START, only includes events that have moved beyond the planning stages (e.g., GTD does not capture suicide bombers who blow themselves up while making vests, which would be included in this study's dataset) (LaFree & Miller, 2015). Furthermore, since 9/11, terrorism research has tended to focus specifically on radical Islamic terrorism (e.g., Ackerman & Tamsett, 2009; Hoffman, 2003; Sageman, 2008). Yet, as indicated by Dahl (2011) and Strom et al. (2010), learning from thwarted plots and unsuccessful attacks and including all ideologies and motivations can prove to be highly valuable in understanding and replicating what counterterrorism measures work best and how policies and resources can be used collectively to improve security. Furthermore, by examining both successful attacks and thwarted plots within an analysis framework, we can identify the relative risk and the completion rate

associated with particular types of behavior and groups over time. This analysis allows us to understand which terrorist threats against the United States should be prioritized based on an empirical assessment of their frequency, modus operandi, and success rate.

Research Using Foiled Plots

Including foiled plots in studies on terrorism has become more common in the last 10 years in the wake of the 9/11 attacks. One reason for not including foiled plots is that identifying these types of incidents and obtaining reliable information about them have been problematic. Following the 9/11 attacks and the massive attention given to terrorism, sources including news outlets and organizations dedicated to tracking terrorism, such as the Southern Poverty Law Center, began publishing information on thwarted plots. The US government has also occasionally released information on foiled plots, as evidenced by a list of 10 plots released by the White House in 2005 (Douglas & Youssef, 2005).

Because information on foiled plots is released by numerous entities, developing a dataset to analyze these types of events has several notable challenges. For one, researchers typically only know about failed plots that are reported publicly (typically following arrests), so an expectation of some level of underreporting is warranted (Strom et al., 2010; Dahl, 2011). Furthermore, because there are no agreed-upon standards about what failed plots should be included, researchers must develop their own inclusion criteria and coding decisions based on their research interests. For example, Strom et al. (2010) include the Christmas Day 2009 airline bombing attempt as "executed" because it reached the point of ignition, whereas Dahl (2011) counts it as a "failed attack." As a result, it is possible to produce somewhat different findings from different studies due to these non-standardized inclusion criteria and coding decisions.

Despite these challenges, several studies have emerged since 2006 that include information on or derive findings from foiled plots. Jenkins (2006) includes an appendix that, although solely focused on jihadist terrorism with little analysis of the plots, lists 46 failed plots from 1993 to 2006. McNeil, Carafano, and Zucker (2010) and Difo (2010) each identify approximately 30 failed plots since 9/11, again focusing on jihadist terrorist plots, and argue that, between 2001 and 2009, the system worked well to prevent attacks, and that all but two of the failed plots they examined were stopped by law enforcement.

Strom et al.'s initial work examined 86 executed and foiled plots occurring from 1999 to 2009 that did or were intended to cause casualties or catastrophic damage to critical infrastructure. This study included all terrorist ideologies and motivations, and they found that almost 80% of the foiled plots were foiled due to the efforts of the general public, including family members of plotters, and state, and local law enforcement. Dahl (2011) uses the expanded time frame of 1987–2010 and includes overseas plots to identify 176 terrorist plots against American targets that have been thwarted. Similar to Strom et al. (2010), Dahl finds that plots are most often foiled through conventional law enforcement activities rather than through the "connecting the dots" processes that have so widely been advocated.

Failed Plots and Suspicious Activity Reporting

Since 2001, the US counterterrorism community has sought methods to detect and disrupt terrorist plots as far "left of the boom" as possible (Carafano, 2009), and many measures have been put into place in order to prevent attacks. These measures range from provisions

of the USA PATRIOT Act to controversial programs such as the warrantless wiretapping of phone calls originating in the United States to the increased use of confidential informants by the FBI (see Chapter 32, this volume, by Shields, Smith, and Damphousse). Many of these measures are largely done on the intelligence side of US counterterrorism policy; however, as noted previously, existing research on foiled plots has shown that the majority of plots are thwarted using information provided by the general public or state/local law enforcement. Historically, a major drawback to thwarting plots has been the lack of coordination and standardization of counterterrorism practices at the state and local levels, which has impeded the sharing and analysis of crucial information (Suspicious Activity Report [SAR] Support and Implementation Project, 2008). For example, in the absence of federal guidance, local jurisdictions developed different procedures for collecting, reporting, and prioritizing suspicious activity reports (SARs). SARs are reports of activities and behaviors potentially related to terrorism collected from incident reports, field interviews, 911 calls, and tips from the public, and some have advocated that a robust SAR program is crucial to preventing terrorist attacks (Steiner, 2010). Recent research on the Nationwide SAR Initiative (NSI), an effort to establish reporting standards with respect to SARs, has validated that there is good alignment between pre-incident activities of previous terrorist attacks and the indicators identified as important by the NSI. Furthermore, this research has found that some of these indicators were observable by the public prior to an attack (Gruenewald et al., 2015).

Since 9/11, a key component to detecting and thwarting terrorist plots in the United States are the more than 17,000 state and local law enforcement agencies that collectively represent terrorism's "first-line preventers," as argued by Kelling & Bratton (2006). This argument centers on the idea that the community policing model, ascribed to by most US police departments, fits well for terrorism prevention since the same close connections to the community that allow for the prevention and investigation of general crime also allows officers to identify individuals or behavior in their jurisdictions that are out of the ordinary and could be terrorist-related, as well as prompt citizens to report suspicious behavior to law enforcement (LaFree, 2012). Despite the vast size of the US law enforcement network and the growing recognition of their importance in the counterterrorism process, state and local resources are still commonly underutilized. The Nationwide SAR Initiative (NSI) was launched in part to remedy this deficiency by establishing "a unified process for reporting, tracking, and accessing [SARs]" (National Strategy for Information Sharing, 2007, pp. A1–A7). The NSI includes a functional standard that identifies activities that should be considered as suspicious with a potential nexus to terrorism or criminal activity, including attempts to elicit information and testing/probing security mechanisms.

Methods and Plots Coding Scheme

Building on earlier research described in the preceding text, we now discuss our process for identifying and coding completed and foiled terrorist plots in order to develop an analysis dataset. This analysis extends the previous research by Strom et al. (2010) by including plots occurring from 1995 to 2012 and looking specifically at the risks associated with different types of terrorist plots. Plots included in this study meet several criteria that follow the same approach as our previous research (Strom et al., 2010). First, plots must meet the definition of "terrorism" used by START's Global Terrorism Database (National Consortium for the Study of Terrorism and Responses to Terrorism, 2012). By this definition, terrorism is "an

intentional act of violence or threat of violence by a non-state actor" that meets two of the three following criteria:

1. The act was aimed at attaining a political, economic, religious, or social goal.
2. The act included evidence of an intention to coerce, intimidate, or convey some other message to a larger audience (or audiences) other than the immediate victims.
3. The action must be outside the context of legitimate warfare activities.

Using these criteria excludes from our data set attacks primarily due to mental illness (a number of mass shootings) and "ordinary" hate crimes in which acts are focused strictly on the victims. Second, a "plot" incorporates a single conspiracy. Plots with multiple targets count as one "case". For example, the 9/11 attacks are counted in our dataset as one case, not four. Third, the plot had to be against a "US terrorism target"—on US soil outside of a conflict zone. This criterion does include US embassies, consulates, and military bases abroad; however, it excludes countries with high insurgent and paramilitary activity against the US military. This means that plots to travel to Iraq, Afghanistan, Pakistan, or other "War on Terror" locations and attack US targets there (or recruit and train others to do so) were excluded, which is consistent with Dahl's (2011) methodology.

Fourth, the plot had to be intended to cause casualties directly or cause catastrophic damage to critical infrastructure (which would cause casualties by definition). In other words, the data set does not include cases aimed primarily at property, including most attacks by the Animal Liberation Front (ALF) and the Earth Liberation Front (ELF). We offer two justifications for this coding decision. First, attacks against people are generally regarded as more serious than attacks on property. Second, our study identified hundreds of attacks on property that had been labeled "terrorism," ranging from small-scale vandalism to large-scale arson; which of these would truly constitute "terrorism" is hard to determine, especially because the amount of media coverage and investigative effort for property attacks is typically much lower than for attacks on people.

Fifth, the plot had to reach sufficient maturity. This means that it actually reached execution ("executed"), or there was an arrest for a terrorist conspiracy ("foiled"). Executed plots did not have to be successful in causing casualties; it just required the perpetrators to attempt an attack on the target site or engage in some level of active pre-planning and preparation to conduct an attack. For example, a suspect who researched a target and constructed a suicide vest but did not complete the attack would be included. Similarly, we would include a plot involving an individual who was attempting to obtain supplies for making explosives to conduct an attack, and was apprehended during that process. As such, foiled plots included both plans for the perpetrators to attack a target directly or to conduct reconnaissance and preparatory work for another group to carry out the attack. Cases in which the arrested were released or acquitted at trial were dropped from the database. In some cases, there were acquittals or plea bargains for some charges and convictions for others; these were usually retained, provided the convictions were clearly terrorism-related. Implicitly, this means that the perpetrators had to take significant and genuinely threatening action toward carrying out the attack; plots that were little more than expressed desires to engage in violence were not included. Thus, for example, threads on extremist bulletin boards expressing aspirations to attack specified targets were excluded.

Finally, information about the plot had to be openly available, discussed in media articles, legal records, government publications, and research databases. Plots that were

not available in open-source data and were known only to intelligence and law enforcement were not included. Most of what is missing are plots still under investigation (not yet mature enough to make arrests) or plots that never reached sufficient maturity to surface (e.g., they collapsed on their own, including numerous plots that never got past early brainstorming).

Identifying Plots

Plots were identified using a combination of pointer references from the Global Terrorism Database, the Federal Bureau of Investigation (2002, 2006), and other sources identifying lists of plots derived from specific ideologies (including the Heritage Foundation's list of plots related to al-Qaeda and Affiliated Movements [AQAM; Carafano, Bucci, & Zuckerman, 2012], the Southern Poverty Law Center [2012] list of plots related to right-wing extremism, and the Fur Commission [2011] lists of plots related to animal and environmental extremism); targeted web searches; and database searches that are consistent with similar studies (Freilich et al., 2014). The candidate plots found were then compared with the criteria listed in the preceding text to see if they met the criteria for inclusion.

Cases were characterized through reviews of open-source articles, including government reports, media accounts, and watchdog group reports. All articles reviewed were open source. A content analysis on the information for each discovered plot coded the driving ideology, means of attack, magnitude of the plot (estimated casualties if the plot was successful), and whether and how the plot was foiled. Each code was determined by the agreement of at least three research team members.

Analyzing Plots

Multiple open-source articles were reviewed for each plot. The authors prepared summaries on each plot in general, the planned attack, the initial clue about the plot (if applicable), how the investigation progressed, and the end result of the plot (execution and/or results of legal proceedings). Plot attributes were coded across a variety of attributes, including motivating ideology, group size, target type, nature of the attack, magnitude (actual or estimated number of casualties if the attack had succeeded, binned by order of magnitude), type of initial clue (initial information bringing about law enforcement attention), source of initial clue, and "triggering clue" leading to an arrest or full investigation, with each code reviewed by at least three of the co-authors. Attack magnitude for foiled plots is, by necessity, subjective. In making the judgments, likely casualties were estimated if the target had been destroyed. For example, for aircraft-bombing attempts, it was assumed that everyone on the airplanes would have been killed, and for large-scale bombing conspiracies, it was assumed that targeted buildings would have been largely destroyed (with both types of plots usually garnering "100–999 casualties" labels). Mass shooting conspiracies were typically labeled as having "10–99 casualties," based on historical experience, such as the Columbine shootings (39 casualties) and the Fort Hood shootings (46 casualties).

Data on plots were entered into a customized Microsoft Access database, with the main table extracted to Microsoft Excel 2010 for analysis. Tabular analyses described in this chapter were conducted through applying pivot tables to the main table. The main table of the database is available as a Microsoft Excel file.

Results

Nature of the Terrorist Threat to the US Homeland

Figure 30.1 shows graphs of the plots per year by ideological motivation. The top four ideologies, which include AQAM, Inspired by AQAM, Militia/Anti-Government, and White Supremacist, are shown. Here, "AQAM" is "al-Qaeda and Affiliated Movements," which includes foreign groups, and "Inspired by AQAM" comprises US residents who radicalized on their own. An "Other" category is also shown that comprises a range of ideologies including anti-abortion, anti-Muslim, Leftist, Rightist, state-sponsored, and other or unknown.

AQAM = al-Qaeda and Affiliated Movements.

There were 150 plots over the 18-year period, or an average of 8.33 plots per year, with an average increase of 0.22 plots per year over this time period. AQAM and Inspired by AQAM groups each represented approximately 19% of the total plots. White Supremacist and Militia/Anti-Government plots accounted for 20% and 17% of plots, respectively. The biggest increase over time pertains to the Inspired by AQAM group, with no plots until 2002 and an average increase after that of 0.28 plots per year, which was significant at the 0.001 level (p-value = 0.000049). At the same time, AQAM (foreign group) plots ramped up at first but then fell off between 2010 and 2012, as shown by a significant negative quadratic trend term (p-value of quadratic term = 0.021).

Figure 30.2 shows the plots by estimated magnitude, in terms of numbers of casualties—actual for executed plots, and estimated for failed plots.

Over time, we see an increase in 100–1,000 casualty plots that is significant at the 0.05 level (average of 0.18 plots per year, p-value of 0.019). At the same time, we see a cluster of 1,000+ casualty plots between 1999 and 2006, with no catastrophic-scale plots since 2006. This ramp-up and drop-off in the most consequential terrorist plots is significant at the 0.01 level, as shown by a negative quadratic trend term (p-value = 0.005). Because five of the six 1,000+ casualty plots are by AQAM groups, this shows a migration of AQAM and those inspired by AQAM away from catastrophic plots since 2006, which may be the result of better countermeasures against these types of plots. For reference, the one other catastrophic plot, the San Joaquin Militia's plot to destroy portions of Sacramento by detonating propane storage tanks, dates back to 1999 (ADL, 2002).

Success in Thwarting Plots

Figure 30.3 compares the numbers of plots that reached execution to the number of plots that were foiled over time.

As shown, from 1995 to 2001, only 31.9% of plots were foiled. Following the 9/11 attacks, from 2002 through 2012, 80.6% of plots were thwarted prior to reaching execution. On average, the percentage of plots reaching execution declined by 3.42 percentage points per year, which is significant at the 0.01 level (p-value = 0.009). On average, the total number of foiled plots increased by 0.433 per year, which is significant at the 0.01 level (p-value = 0.001). The total number of plots reaching execution declined by 0.21 per year, despite the overall increase in plots; this decrease was significant at the 0.1 level (p-value = 0.055).
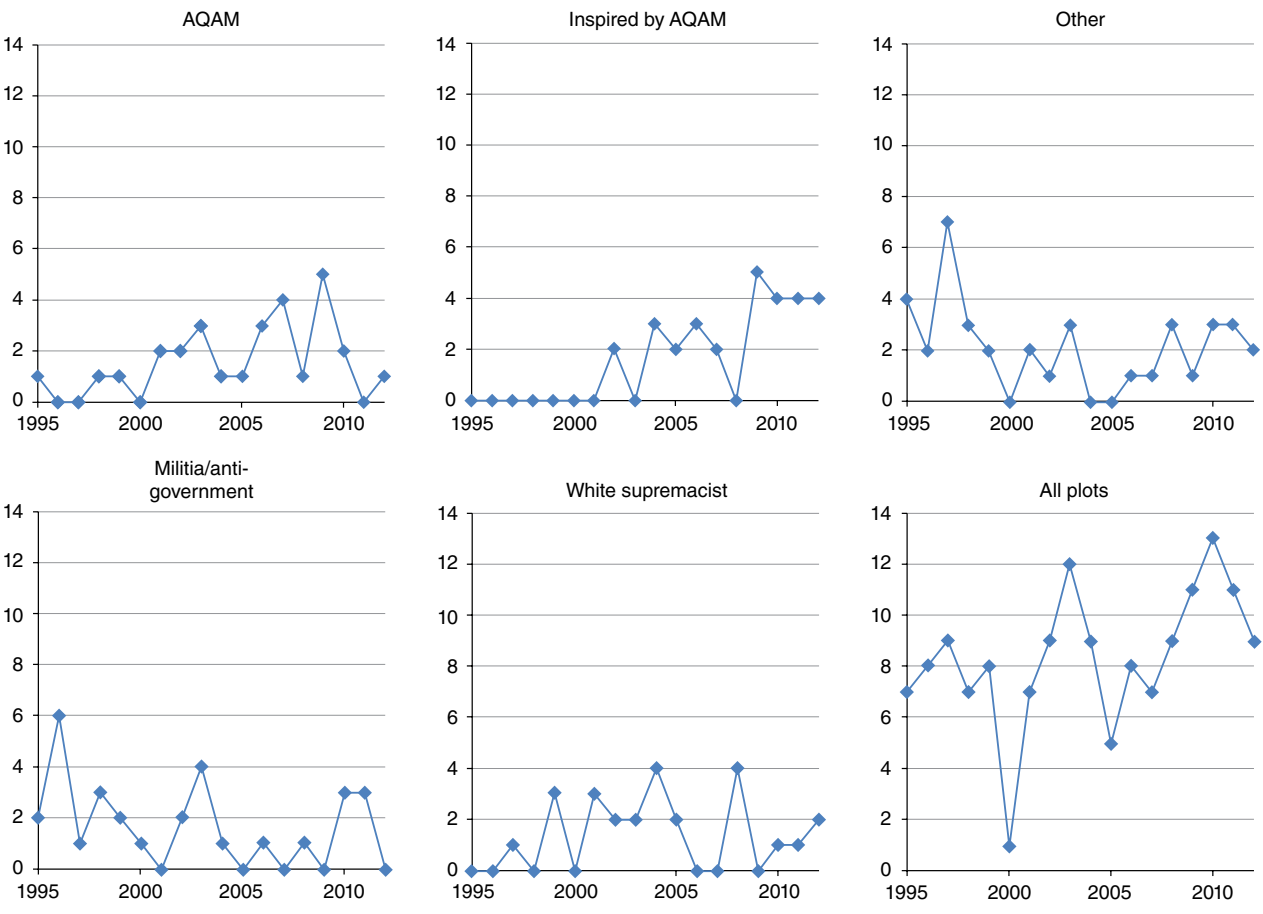
Figure 30.1 Plots by Ideological Motivation
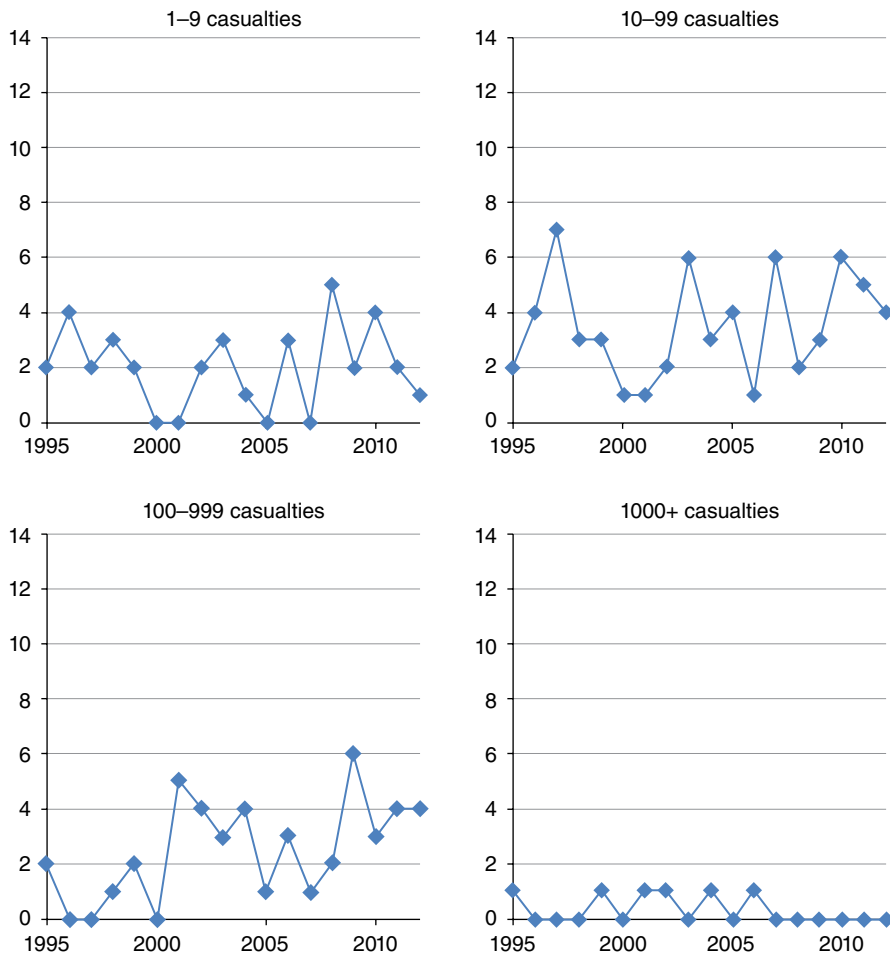
Figure 30.2   Plots by Estimated Casualty Magnitude

How US Terror Plots were Foiled

Initial Clues about Plots   Figure 30.4 shows the sources for the initial clues received for both foiled and executed plots (if applicable).

Intelligence efforts only generated initial clues in about 14% of the plots, which is not that surprising, given that a large majority of plots are by people residing in the United States. Federal law enforcement (e.g., FBI, US Marshalls) efforts were the biggest source of initial plots, followed by reports from the public and state and local law enforcement. No initial clues prior to execution were identified for over one quarter of the plots. Also, we see that there were a number of missed opportunities—in which clues came from intelligence and from the public but were not acted on in time. Table 30.1 shows the types of information that constituted initial clues about terror plots.

Findings agents and informants (part of federal, state, and local law enforcement efforts for the most part) were the single largest source of clues leading to foiled plots. Most of
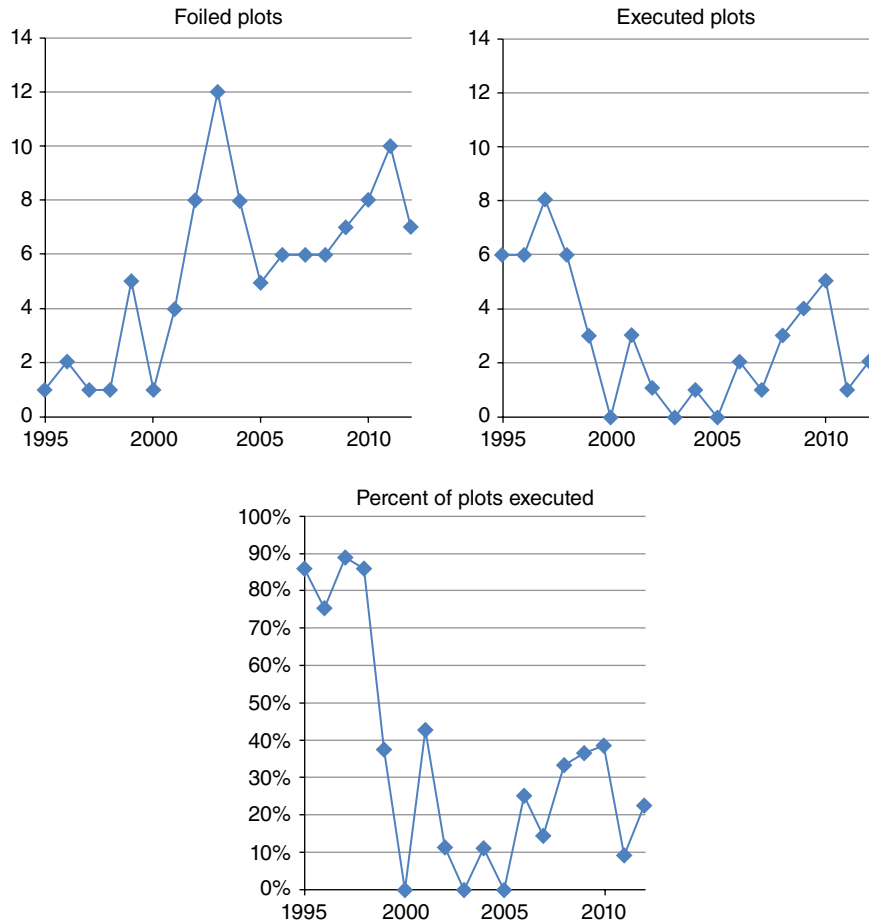
Figure 30.3 Foiled and Executed Plots

these discoveries were from in-person investigative work; there were a few cases in which would-be terrorists solicited agents and informants online. For example, the FBI used an inside informant and another informant posing as a weapons provider to build a case against a militia group based in Alaska where six members were ultimately arrested in connection with an alleged conspiracy that included plotting to kill judges, an IRS agent, and Alaska State Troopers. This finding is consistent with the FBI's increased use of informants since 9/11 to infiltrate and uncover terrorist plots (Bartosiewicz, 2012).

Identifying associations with known suspects were the second largest source of clues. Here, the associations were stronger than simple acquaintance or business associations. Examples included making suspicious communications together, being roommates, and participating in meetings associated with terrorist planning. Investigating prior terrorist activity (typically smaller-scale activity) also helped identify perpetrators who were planning future attacks. That said, there were several cases in which associations were discovered, but plots reached execution anyway. After 9/11, there has been an increased emphasis on reporting suspicious activity that has a potential relationship to terrorism, through the NSI and "See Something, Say Something" campaign, for example (O'Keefe, 2011; Kimery, 2010).
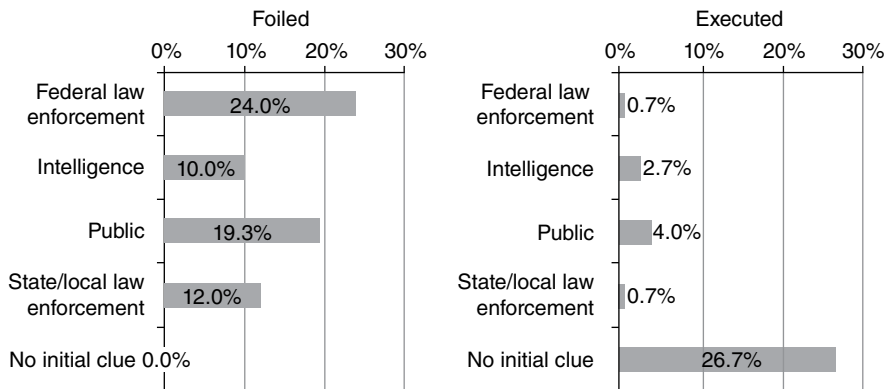
Figure 30.4 Sources of Clues for Foiled and Executed Plots

Table 30.1 Initial Clues about Terror Plots

Type of Activity (n = 150)	Foiled Plots	Executed Plots
Links to terrorism suspects and activity	13.33%	2.00%
Association with suspects/terrorists	11.33%	2.00%
Prior terrorist activity	2.00%	
Discoveries by agents and informants	18.67%	
Undercover agent solicitation	16.00%	
Online solicitation	2.67%	
Crime and criminally suspicious activity	10.00%	0.67%
"Ordinary" crime (not related to plot)	4.67%	0.67%
Precursor crime (related to plot)	4.00%	
Criminally suspicious activity	1.33%	
Tips from the public	10.00%	3.33%
Tip about terror-related activity	10.00%	3.33%
Threats from perpetrators	1.33%	0.67%
Threat to authorities from perpetrators	1.33%	0.67%
SARs potentially related to terrorism	12.00%	1.33%
Extremist rants reported by bystanders	2.67%	
Reporting of paramilitary training (US or overseas)	1.33%	
Reporting of potential surveillance activity	1.33%	
Detection of smuggling-like behavior	0.67%	0.67%
Discovery of suspicious documents	2.00%	0.67%
Discovery of suspicious packages	2.67%	
Reporting of suspicious purchases	1.33%	
Not applicable (no initial clue)		26.67%
Not applicable (no initial clue)		26.67%

From 1995 to 2012, SARs constituted the third largest source of initial clues leading to foiling plots. A wide variation of types of suspicious activities were reported, including the following:

- Potential target site surveillance
- Extremist "rants" that were interpreted by those hearing them as implying the speaker wanted to be personally involved in carrying out violent attacks

- Smuggling-like behavior of would-be terrorists trying to get through transit points
- Discoveries of suspicious documents, such as target site surveillance write-ups or boxes of fake government ID cards
- Paramilitary training—either training in the United States or seeking to travel overseas to train
- Suspicious purchases of weapons, poisons, or explosive precursors
- Several cases of would-be attackers making violent threats to authorities

Despite the range of different types of SARs, all were atypical and threatening, with aggravating circumstances. Unsolicited public tips that a subject was engaged in terror-related activity tied for the fourth largest source of clues. Receiving these tips depends heavily on strong relationships between authorities and the communities containing potential terrorists. This category had the largest executed-plot rates, as there were issues with both evaluations of the tips and ensuring follow-ups.

While not commonly thought of as a primary method to uncover a terrorist plot, discoveries of terror plots during routine law enforcement investigations of seemingly ordinary crimes and criminally suspicious activity also constituted the fourth single largest source of initial clues. Investigating crime provides a two-for-one bonus: in addition to solving the crimes themselves, in very rare cases, such investigations lead to foiling a terrorist plot. This finding implies a need to ensure that well-established processes are in place to report terrorism-related discoveries during criminal investigations.

Discoveries that became initial clues leading to terror plots have five themes in common—they were threatening, atypical, significant, credible, and specific (TASCS).

- *Threatening*: The activity has a clear relationship ("nexus") to an aspect of terrorism, or "ordinary" but serious crime. Note that this does not have to relate to a specific plot—traveling overseas to get paramilitary training from a terrorist group constitutes being "threatening."
- *Atypical*: Common, benign explanations for the reported behavior are highly unlikely.
- *Significant*: The behavior reflects genuine commitment.
- *Credible*: The report appears to be reliable.
- *Specific*: The report is detailed.

Investigations Following Initial Clues   Figure 30.5 summarizes the investigative activities that occurred once initial clues were received.

As Figure 30.5 shows, most plots required additional investigative activities following receipt of an initial clue regarding a plot. Interestingly, investigative activities related to connecting the reported activity to other cases of known terrorist activity—commonly referred to as "connecting the dots"—only led to plots being foiled in a handful of cases. One example involves a planned attack on a Columbus, OH, shopping mall that was foiled as a result of following up on persons named by a subject who had plotted to destroy the Brooklyn Bridge.

In the bulk of cases that reached execution, no clues were received in advance. In a few cases, the suspects were under active investigation or criminal supervision at the time of the attack; these consistently were small-scale attacks in the "grab a gun and start shooting" category. For example, the perpetrator of the 2009 shooting at an Army recruiting office at Little Rock, AK, was under preliminary investigation after being detained in Yemen.
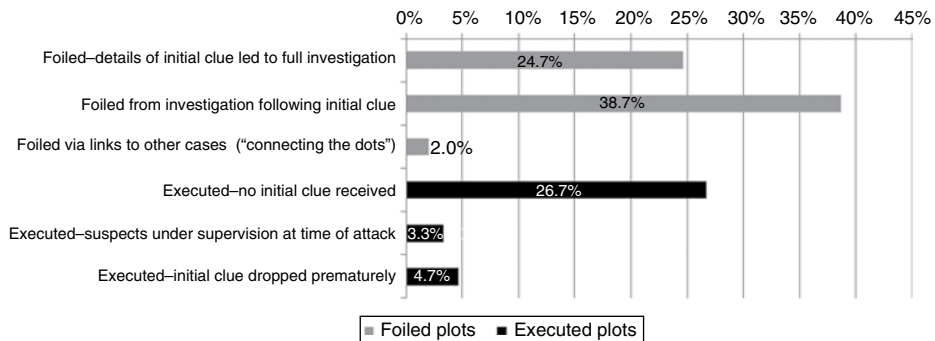
Figure 30.5 Investigations Following Initial Clues

Table 30.2 Largest Plots and Whether Clues were Dropped Prematurely

Plot	Casualties	Dropped Clues?
9/11 attacks (2001)	2,977 killed	Yes
Attempted Christmas-day bombing of NW 253 (2009)	290 potential deaths	Yes
Bombings of Kenya and Tanzania US embassies (1998)	224 killed	Yes
Attempted "shoe bombing" of AA 63 (2001)	197 potential deaths	No
Oklahoma City bombing (1995)	168 killed	No
Columbine High School shootings (1999)	15 killed	Yes
Fort Hood shootings (2009)	13 killed	Yes

Of great concern are cases in which an initial clue was received, but was not forwarded to all agencies needing to know about it, or where no follow-up investigative activities were conducted. Table 30.2 shows the seven largest plots in terms of numbers of actual or potential deaths, and whether clues were dropped prematurely.

As shown, in five of the seven largest plots, initial clues were received but dropped prematurely—and there were only seven executed plots with dropped clues.

Discussion and Conclusions

This chapter has attempted to provide empirical evidence on several key issues related to the nature of the recent terrorist threat against the United States, and how best to identify and thwart plots. The analysis dataset included 150 completed and foiled terrorist plots across all motivating ideologies to obtain the broadest perspective possible. We now discuss implications of this analysis in light of the broader issues of (1) whether the American public is safer from terrorist attacks today than a decade ago, (2) what the terrorism landscape is like and what current threat levels are, (3) what types of information and activities have led to foiling plots, and (4) when plots did reach execution, what, if anything, went wrong with counterterrorism efforts.

First, it is often asked whether we are safer since 9/11, particularly considering the amount of resources invested in preventing terrorism. The clear implication of this research is that we are much safer post-9/11, and are particularly better at thwarting plots. The proportion of foiled plots has jumped from a 32% interdiction rate in the years prior to 2001

to more than an 80% interdiction rate in the years following 2001. Further, there has been a migration away from terrorists even attempting catastrophic attacks (1,000+ casualties) since 2006. However, there is a continued and slightly increasing risk from smaller-scale attacks. The smallest-scale attacks (1–9 casualties) are especially notable because they have reached execution almost 60% of the time. This is not surprising, given the extreme challenge of identifying and thwarting smaller-scale plots, which usually involve single actors or a few individuals and little pre-operational planning. While numbers of plots by single actors vary widely by year, these single-actor plots accounted for 47% of the total plots in our dataset. It is with many of these "lone-wolf" cases that the efforts of informants or undercover agents, often through solicitation over the Internet, have been most helpful.

Second, although AQAM—and, more recently, homegrown radicals who are inspired by AQAM—continue to be a focus of US counterterrorism efforts, it is vital not to overlook other types of terrorist groups. Over the 1995–2012 timeframe, AQAM-related plots constituted just under 40% of all plots, about the same percentage as White Supremacist-related and Militia/Anti-Government-related plots combined. Thus, while many individuals only think of radical Islamic terrorism post-9/11, the terrorism threat landscape includes many motivating ideologies, and these groups do not stop simply because counterterrorism efforts focus on one particular ideology.

Third, there is a continued need to stress the importance of both law enforcement and the public in preventing attacks and to support prevention efforts. More than 80% of plots foiled from 1995 to 2012 were foiled due to observations by law enforcement or the general public. For officers, there is an ongoing need to provide processes and training so they can identify and report terrorism-related observations and materiel. For the public, in addition to continuing educational programs and well-known reporting processes, there is a strong need to maintain good relations with communities that might have contacts with potential terrorists. Given that almost 30% of foiled plots have been thwarted because of reports from the public, it is vital that members of the public in all communities be comfortable enough with authorities to report potential terrorist-related activity to them.

Finally, there is a strong need to support process management and "quality assurance," so that initial clues are properly pursued and key findings are shared among all investigators. As noted, in five of the seven largest terrorist plots that reached execution, there were clues about the plot that were prematurely dropped.

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The Ten Commandments
for Effective Counterterrorism

Simon Perry, David Weisburd, and Badi Hasisi

The terrorist threat has significantly impacted life in Western democracies. Thus, law enforcement and intelligence and security agencies need to collaborate to protect citizens in democratic societies. Terrorists strive to create fear and anxiety and diminish the resilience of society. Their goal is to destabilize the social order by increasing the frequency and intensity of attacks and inflicting mass casualties. Therefore, effective counterterrorism is geared toward helping the general public maintain their daily routines and personal sense of security by deterring, uncovering, foiling, and defeating attacks; ensuring efficient first response; and facilitating recovery from these attacks (Howard, 2004; Weisburd et al., 2009; Perry, 2014).

Even though counterterrorism has become a major task for law enforcement, there are only a handful of counterterrorism models that demonstrate effective strategies, tactics, and best practices for policing terror. What is more, not much is known about how these models can be systematically evaluated and quantified for their effectiveness (Lum et al., 2006; Weisburd et al., 2009; Perry, 2014). The lack of evidence-based counterterrorism models and of systematically evaluated strategic and tactical measures is a result of two factors. First, law enforcement intelligence and security agencies are not enthusiastic about collaborating with researchers because they fear this could expose and compromise their counterterrorism methods, tools, sources, and tactics. Second, this type of research runs into difficulties in operationalizing success. The determination of cause and effect is complex because of other historical variables, which make the creation of a control situation complex (Perry, 2014).

The development of evidence-based practices for effective police tactics for responding to terrorism has begun to receive attention from criminologists. According to Clarke and Cornish (2001), crime is primarily an outcome of a *process* wherein the individual assesses *opportunities*, evaluating the expected benefits of a behavior against the probable costs, in the circumstances of a particular time and place. Therefore, Weisburd and Waring (2001) elaborate on Felson and Clarke's 1998 approach, and argue that effective crime prevention implies decreasing the *opportunities* that specific situations grant and that encourage the commission of a crime. Clarke and Newman (2006) claim that the behaviors that encompass

terrorism (even suicide terrorism) are similar to behaviors of conventional "ordinary" criminals. They conclude that terrorism is a form of crime, and that terrorists are criminals. Perry and Hasisi (2015) also argue that the terrorist's rational choice cost-effect decision-making is similar to non-terrorist offenders. For that reason, they claim that practical counterterrorism should mostly deploy proven situational crime prevention techniques, which have effectively prevented regular crime.

This chapter introduces and reviews "Ten Commandments" for best counterterrorism practices. These practices encompass proven strategies, tactics, and practices from the field of policing terrorism.

First Commandment—Reduce the Opportunities for Terrorists to Attack

Terrorism, like any other criminal behavior, is a result of two preexisting conditions: *motivation* to perform the terrorist activity, and *opportunity* to carry it out in certain circumstances (Clarke & Newman, 2006). As a result, prevention may be carried out by either neutralizing *terrorist motivations* or reducing *terrorist opportunities*, or both (Perry, 2014). Terrorism is viewed by the "conciliatory model" as a political problem that should be prevented by resolving the motivation to commit terrorist activity. Therefore, a political solution should be provided by policymakers, brokers, and diplomats to address the root causes of terrorism (Greene & Herzog, 2009). Conversely, Clarke and Newman (2006) maintain that counterterrorism "must not rely on changing the heart and minds of terrorists. The motivation for terrorism results from long-term social, cultural and psychological pressures, which are difficult to alter" (Clarke & Newman, 2006:11). They claim that it is easier to reduce terrorist *opportunities* than to moderate terrorist *motivation*, and that easy opportunities encourage terrorists to attack. Consequently, the most effective method for preventing terrorism is to implement strategies that remove the opportunities to execute terror strikes.

Neutralizing terrorist motivations is not a primary mission for law enforcement. Moreover, it appears less effective in preventing terrorism than by reducing opportunities. Thus, most counterterrorism strategies focus on trying to decrease *opportunities* rather than reduce *motivations*.

According to Clarke and Newman (2006, p. 9), there are four "pillars of terrorism opportunity": targets, weapons, tools, and facilitating conditions. Effective counterterrorism should therefore reduce terrorists' capabilities and opportunities to reach and harm targets or to produce or acquire weapons and tools, and minimize the facilitating conditions to perform an attack.

Second Commandment—Reduce Opportunities Proactively and Responsively, Combining Offensive and Defensive Measures

Opportunities can be reduced defensively and/or proactively. In fact, law enforcement routinely uses both reactive and proactive approaches. In the reactive response, law enforcement agents respond after the fact to a crime or a terrorist act. Police reactions include collecting evidence, gathering intelligence, identifying perpetrators, and arresting suspects. This reactive approach is a defensive method that could at best prevent a strike that has

been instigated, or minimize the damage of the attack. In addition, the defensive model aspires to protect potential vulnerable victims and targets from further aggression through "target hardening" (Clarke & Newman, 2006; Weisburd et al., 2009), and seeks to restore order and calmness after attacks have been committed.

The proactive model strives to thwart the crime/terror attack prior to its instigation. This model has been practiced by law enforcement for decades to deal with terrorism. It is based on intelligence gathering and analysis, and operational execution. Typically, law enforcement intelligence identifies potential criminals/terrorists, collects incriminating intelligence and evidence, and foils the crimes/attacks before they occur, by arresting the perpetrators. The core of this scheme, which has been classified as "high policing" (Bayley & Weisburd, 2009; Brodeur & Dupeyron, 1993), is the employment of covert intelligence gathering, surveillance, and operational prevention tools. Proactive prevention seeks to harm terrorist organizations and individuals physically, psychologically, and financially, to strike at their operational capabilities, infrastructures, morale, and motivation. These proactive measures are intended to deter, disrupt, and prevent terrorist activities (Weisburd et al., 2009; Hasisi et al., 2009; Perry, 2014).

The proactive approach also drives terrorists into a defensive mode, where they spend a great deal of time and resources concealing their activity, thus limiting their ability to carry out attacks (Perry, 2014). In the modern era of globalization, terrorist groups tend to be elusive targets, taking advantage of open democratic societies and utilizing advanced communication technologies to evade traditional security agencies' surveillance. Some of these stateless terrorist groups are aided by supporting states and territorial terrorist entities. As a result of this continually changing character of terrorism, the proactive strategy is becoming more complex (Hasisi et al., 2009).

Unfortunately, it is impractical to entirely prevent all terrorist attacks; therefore, it is good to have in place an effective defensive reactive approach alongside the proactive routine. This joint approach is complementary rather than contradictory. A combination of both methodologies could prevent or at least minimize terrorist opportunities to attack, halt in-progress attacks, reduce the amount of the casualties and damage, as well as restore order and a sense of safety. Such a comprehensive counterterrorism model allows the public to maintain their everyday routines and preserve their morale and resilience.

In the past, it was common for local law enforcement officers in the United States to view themselves primarily as "first responders." This is changing, and officers now also see themselves as "first preventers" of terrorism. Connors and Pellegrini (2005) claim that, if local officials and police in the United States want to prevent or recover from future terrorist attacks, they ought to take the lead on counterterrorism, and not depend upon federal agencies located hundreds of miles away.

Weisburd and Braga (2006) note that evidence-based studies have found that proactive policing tactics have prevented crime. The New York City police department has adopted this successful concept of "prevention" and adapted it for the war on terror (Bratton & Kelling, 2006).

According to Innes (2006), proactive, intelligence-led policing was initiated in the United Kingdom as early as the 1990s. The police have improved their effectiveness by identifying suspicious people and vulnerable places, and then focusing on crime prevention. Since the police have limited resources, and live informants ("HUMINT"—HUMan INTelligence) are difficult to develop, they often rely upon networks of community intelligence contacts to scrutinize potentially dangerous individuals. Proficient units were created to develop and maintain this "community intelligence feed" that would serve both anti-criminal and

anti-terrorist purposes. This transformation reflects a more proactive mode of operation based on the principles of risk management (Perry, 2014).

The Israeli model for policing terrorism has a long history of combating terrorism and is efficient and professional in its counterterrorism approach (Weisburd et al., 2009; Perry, 2014). The Israeli security apparatus combines proactive offensive and reactive defensive methodologies. It is executed in three circles of activity: (a) *sources of terrorism*—proactive early prevention, interdiction, and treatment of the sources of terrorism to thwart terrorist attacks before they are instigated; (b) *the attack route*—response activities once an attack has been launched, to foil terrorist attacks before they reach the target; and (c) *the terror targets*—defending and "hardening" potential targets before any attack, and response activities at the scene during and after an attack.

The Israeli counterterrorism model emphasizes proactive actions, because it focuses on detaining terrorists, reducing the frequency and severity of attacks, and thus resulting in fewer casualties. This proactive mode has a superior counterterrorism outcome, preventing terrorists from achieving their objectives, and allowing the general public to preserve their everyday routines (Perry, 2014).

Third Commandment—Execute Proactive Offense Based on Quality, Available and Timely Intelligence, and Operational Capabilities

The proactive offensive mode is fundamental for preventing attacks before they are instigated, and therefore is the most effective counterterrorism strategy. By developing quality intelligence and instituting operational capabilities, it enables police to identify and respond to terrorist threats before they actualize, and to uproot terrorists and their infrastructure (Weisburd et al., 2009; Perry, 2014). This proactive scheme is based on two imperative capacities: producing quality intelligence and creating operational capability. *Quality intelligence* is the capacity to collect, in real time, reliable information about the terrorists' capabilities, intentions, and specific plans, analyzing and disseminating this intelligence for use in police operations. Quality intelligence seizes the element of surprise, which is the key advantage for a terrorist attack, placing the element of surprise in the hands of law enforcement.

The production of quality intelligence is a circular process that is continuously set to reveal a reliable depiction of the threats. The intelligence analyst defines (based on the initial information) the information gaps—that is, the missing information needed to generate a reliable intelligence picture. This *intelligence picture* is composed of all the information about matters that are significantly linked to the various threats, which are called "topics of interest," and all the information about individuals who are coupled significantly and create the threat, who are called "targets."

For the purpose of revealing the missing information and closing the "intelligence gaps," an intelligence plan is prepared for collecting and exposing the potential threats. The plan comprises three levels of information gathering: the abovementioned "topics of interest" and "targets," as well as the territorial coverage, which is the entire information about a specific area (neighborhood or town), including who is doing what, when, and where, and who knows about it. At the initial phase, potential sources of information are identified to collect information on all three levels. At the next step, a "recruitment plan" is prepared, which includes the recruitment methodology and the scheme of running the various live informants ("HUMINT") and technical sources (called "SIGINT"—signals intelligence,

including wiretaps and surveillance activities). Other sources of information include investigations and debriefings, archives, and databases; public open information such as the news media and the Internet; and fellow agencies from the same country or international (Perry, 2014).

All information collected from various sources flows to the "nerve center"—where analysts prepare and present an integrated "intelligence picture." Their job is an unending process: they direct the collection of intelligence according to the requirements of the management directive guidelines; they support the development of "HUMINT" sources; they develop and deploy intelligence capabilities and tools; they handle the Intelligence Database; and they assist in the preparation of an operational activity. Police intelligence generally deals with criminal organizations that are small active groups from within the civilian setting, where as HUMINT sources are considered effective for penetrating regular criminal organizations whose structure and character resemble terrorist groups (Perliger et al., 2009).

The mere gathering of quality and timely counterterrorism intelligence without the capacity to seize control of the target and/or prevent the attack is insufficient. The task of capturing the target and/or preventing the attack is executed by special operations units with the skills to enter the scene where terrorist actions are being planned and prepared. These special operations units have a dual mission: First, to utilize the intelligence to foil the attacks before they are launched; and second, to surprise and threaten the terrorists' own sense of security, keeping them busy and on the run. Such units should be able to conduct undercover operations in which they reach and arrest their target without being detected. The police should deploy specialized elite counterterrorism units, trained to handle very specific terrorist situations, such as releasing hostages and carrying out special operations using small disciplined teams highly trained in commando-style military operations (Perry, 2014).

Bratton and Kelling (2006) claim that the police should organize special training programs to proactively attack terrorism. Police departments from all over the world are exchanging information with other countries to confront this global threat. Israel, for example, has welcomed police forces from all over the United States for training and exchange visits.

Fourth Commandment—Implement "Target Hardening" Based on a Risk Analysis for Vulnerabilities

Police and security resources are limited, while the number of potential targets is endless. Yet, not all targets are similarly attractive for terrorists. Therefore, the police need to conduct an efficient defensive effort, using vulnerability and risk analysis based on intelligence to build an effective protection plan. Vulnerability and risk assessment must then drive operational responses to create a truly effective policing apparatus against terrorism (Connors & Pellegrini, 2005). Intelligence and risk assessment allows security forces to protect, in advance, potential targets that may be selected by terrorists. The plan needs to prioritize the allocation of defensive tools to harden the more vulnerable potential targets. Davis et al. (2004) claim that, before 9/11, only a quarter of the police departments in the United States conducted risk assessments, compared to three-quarters that carried out such analyses after 9/11. Private security firms are the police's main collaborators in "target hardening."

The police force needs to train, and to provide necessary information and supervision to facilitate the private security firms' ability to better protect their clients' facilities. In Israel,

all public facilities, such as office buildings, malls, shopping areas, restaurants, and hospitals, have private security operatives who check customers entering the facility and conduct other security-related activities. The police, before approving the business licenses for any facility to operate, examine the business' facilities and their security procedures. The police carry out periodic security exercises at active businesses, in which facilities that do not hold to the security standards set by the police may be shut down through court orders (Weisburd et al., 2009; Perry, 2014).

Since it is not realistic to attack-proof all possible targets, the protection plan should aspire to minimize the number of victims and damage in case a terrorist attack is not thwarted. For example, the private security, guided by the police, should prevent terrorists from accessing indoor public facilities. The principle here is that an explosion that strikes within a closed environment (especially if crowded) will result in more destruction than if the same explosion occurred outdoors, hopefully away from the large crowd.

The security method of "target hardening" is modular, entailing four security elements whose purpose is to deter and minimize situational opportunities among any terrorist potential attackers, as well as to effectively neutralize any aggressor, and to prevent the loss of human lives, injuries, or property damage. These four security elements are:

1. Armed security first-response personnel that should: protect the population by facilitating a self-defense first response in the time of need; strengthen the sense of security; and deter any threats to safety. This security element of protection is composed of different levels of intensity.
2. Improvement of facility defense by means of physical and organizational security "target hardening," which includes elements such as gates, security fences, secured entrance gates for vehicles, emergency one-way exit gates, public announcement systems (PA systems), CCTV systems, communication and alarm systems, public response systems, emergency centers, etc. Target hardening by installing security measures lessens the target's vulnerability and its attractiveness to potential perpetrators. Assessing the vulnerabilities of the inherent features and addressing them are important elements in the overall level of safety and protection from attempted attacks.
3. External reinforcement conducted by the local police force (before, during, or after an attack incident).
4. Preparedness through training and drills.

An other important element of target hardening is educating the public and improving routine security preparedness, which will be discussed in the Tenth Commandment (Educate, Communicate, and Update the Public before, during, and after a Terrorist Event).

Fifth Commandment—Constantly Create a Hostile Operating Environment for Terrorists through Bottleneck Passages that Generate Intelligence Footprints

The "broken windows" theory, according to Bratton and Kelling (2006), generates a hostile setting for potential criminals, creating the uncomfortable sentiment that they are the ones threatened. Similarly, law enforcement's intelligence and security apparatus should produce a hostile environment for terrorists. That should be done primarily through potential terrorist support structures, constantly changing the terrorists' operating environment by

establishing "bottleneck passages." Bottleneck passages, such as obstacles and barriers, force terrorists to take counteractions, involving other co-conspirators. The participation of other co-conspirators forces the usage of extra communication channels, leaving "intelligence footprints," thus increasing the prospects for intelligence collection by both human and signal technical channels. Ongoing intelligence and operational pressure will result in terrorists feeling unable to rely on partners; it will prevent them from remaining at a given place for more than a short time, causing them to sleep every night at a different location, and putting terrorists constantly on the run in a distressing self-preservation mode. By keeping terrorists busy and on the run, it is possible to uproot them and their infrastructure, pushing them into a defensive and ineffective mode. As a result, they will need to spend more time on self-preservation and have less time, resources, and capabilities to plan and carry out terrorist attacks. The creation of a hostile environment for the terrorists will also take away the element of surprise from the terrorists and put it in the hands of the law enforcement, intelligence, and security apparatus.

Sixth Commandment—Conducting Drills in Order to Train Security Forces in Effective Methods of Delaying Attacks That have Already been Launched

Once a terrorist attack has been launched and set in motion, security forces employ intelligence both for proactive offensive thwarting operations and for responsive defense measures (Perliger et al., 2009). In a response to attacks that are not thwarted by the offensive–proactive activity, terrorists should be stopped once they are on their way to the targets. To foil launched attacks, there is a sequence of workable procedures to delay the terrorist's movement, once an attacker is en route to the target. The series of possible tactics includes setting up roadblocks, generating traffic jams, and closing certain public facilities or streets. There are two main purposes for generating such obstacles: The first is to slow down the terrorist to delay the attack. This provides the police with more time to bring special operations units to engage with the terrorist on course, and to simultaneously organize better defense for the potential terrorist target(s). The second purpose of the obstacles is to compel the terrorist to establish additional communication channels that increase the prospects for enhanced "HUMINT" and "SIGINT" intelligence gathering. The enriched intelligence and better police deployment allow special operations units to engage with the terrorist en route and increase the probability for interdiction before the attack takes place.

As soon as there is a specific threat that terrorists have penetrated through the security, the police should consider using the media to inform the public to stay away from crowded locations.

Seventh Commandment—Secure, Evacuate, Restore Order, and Collect Evidence and Intelligence at an Attack Scene—Effectively and Rapidly

As first responders, obviously the police are expected to respond both during and after a terrorist attack, and to do so effectively to manage the crisis at targeted sites. The Israel National Police (INP), which has immense practice in managing numerous terror attack scenes, has developed effective procedures.

A basic principle of managing an attack scene is that there is a clear division of authority. Through the whole process, the highest territorial police commander present at the scene is in charge and answerable for all activities that occur until he or she has been released by a higher commanding officer, or when the scene is cleared. The overall responsibility is never divided, and it is always transparent. Throughout the process, all other organizations at the attack scene are subordinated to the police commander, including the medics, the firefighters, and even the employees of the local city council who will later clean the area (Weisburd et al., 2009; Perry, 2014).

The first assignment is to secure the scene from secondary explosive devices or additional terrorists. This procedure addresses a terrorist attack method by which they target the first responders, policemen, and the medics, who are first on the scene of an attack. Consequently, the first allowed on the scene are the bomb-squad technicians, who isolate and search the scene. Only those medics who treat and evacuate the most critically injured are allowed on the scene at this phase, along with the bomb-squad technicians. The remaining injured individuals are cared for and evacuated only after the scene has been secured. Deceased persons identification forensic personnel (a unit within a special civil unit) follow, to identify the dead and evacuate the bodies. The bomb squad laboratory collects remains to identify the type of explosive device or weapons used, for the purpose of linking it to a specific terrorist organization and/or bomb maker. At the same time, the forensic field unit collects evidence with the criminal investigators. Simultaneously the traffic and patrol officers handle the outer ring of the attack scene: they place road blocks isolating the attack scene, guide traffic, clear the way for ambulances, search for any co-conspirators who might have assisted the attacker and are trying to get away, and control the crowds. Intelligence units collect information that may assist in identifying the source of the explosives and the people responsible (Weisburd et al., 2009; Perry, 2014).

As mentioned, to defeat the goals of terrorism, the main object of police counterterrorism strategies is to strengthen the population's resilience, enabling them to continue with their daily routines. It is expected that a swift clearing of the terrorist scene reduces the psychological consequence of the attack. Hence, timing is essential, for psychological reasons. Punctual treatment of the scene is also important for forensic reasons, to collect evidence before the scene is contaminated. In the Israeli model, all of these activities of working on clearing and normalizing a terrorist scene are expected to be completed in a maximum of 4 hours.

Eighth Commandment—Deploy, Equip, and Train Fast Response Teams

An effective response to terrorism requires the ability to organize and respond quickly and proficiently to prevent or at least reduce the damage of a terrorist attack. Police officers must thus be trained and equipped to confront the terrorism threat. Kelling and Bratton (2006) maintain that counterterrorism has to be woven into the working procedures and practices of every police department, so that it becomes part of the daily thoughts of officers on the street.

All police officers, including those whose central task in the police force is not counterterrorism, ought to go through basic counterterrorism training. This training should drill officers for an unanticipated encounter with a terrorist episode. It should focus on imparting first-response expertise (such as isolating the location of a terrorist attack effectively). At a higher level of response, the police should form and train fast response teams that

would defuse terrorist events and terminate them as soon as possible. The objective of such teams is to prepare for fast intervention to minimize the harm, and to contain the event until the attack is resolved or the special counterterrorism unit takes over. Response time is crucial in containing a terrorist attack; thus, the fast response teams ought to receive adequate training (such as in urban warfare), applicable drills, equipment, and suitable transportation, such as motorcycles (Weisburd et al., 2009; Perry, 2014).

Ninth Commandment—Clearly Define the Division of Authority and Responsibility, and Practice Crucial Procedures and Inter/intra-agency Cooperation and Partnerships

A number of democratic countries have a highly centralized police organization at the national level, with a distinct purpose and responsibility related to crime, terrorism, and public order. Nevertheless, even in such circumstances, the police force has partners in counterterrorism. Additionally, each police force is composed of various units, so that harmonized cooperation does not always come naturally. This is especially true in the chaotic reality of a terrorist attack; therefore, it is crucial to have an unmistakable division of authority that unequivocally designates the one person in charge at a certain time and place, bearing ultimate responsibility. Vagueness about who is managing the incident leads to confusion and failure that will end with unnecessary victims and destruction.

Israel, for example, has a national hierarchical and centralized police force (Israel National Police, INP), with special centralized operational counterterrorism units. The internal security intelligence gathering in Israel is also centralized, which further contributes to the efficiency of deterring, detecting, identifying, and thwarting processes of potential terrorist attacks (Greene & Herzog, 2009). There is personal and constant formal and informal cooperation between the police and the Internal Security Agency (ISA) (Weisburd et al., 2009; Perry, 2014). This intimate partnership between the INP, which has overall responsibility for internal security, and the ISA, which is the main initiator of counterterrorism intelligence, was not a minor accomplishment. It took immense effort at all operational and command levels to create this trusting relationship between the INP and the ISA. This association facilitates an almost immediate ability to translate critical ISA information into an INP foiling operation. More broadly, the intimate relationship between the INP and the ISA supports the exchange of intelligence while enabling consistency in both offensive and defensive counterterrorist operations (Hasisi et al., 2009).

Many countries do not have a centralized police system. These countries must coordinate their counterterrorism activities on the national/federal as well as the local levels. In the United States, for example, where there are around 17,000 police organizations on the federal, state, and local levels, there was, before 9/11, a lack of intelligence and operation coordination that has been strongly criticized (Weisburd et al., 2009). Subsequent to 9/11, local, state, and federal law enforcement agencies began to exchange information, as well as to create centralized special officers and units, including special response teams.

Bratton and Kelling (2006) claim that intelligence-led policing is having a strong influence on the major efforts that are being made to restructure police capabilities in the United States for an increasingly proactive intelligence gathering and analysis apparatus. Numerous state and local departments are now creating their own systems, assembling databases and sharing information, rather than relying only upon the federal government for intelligence.

This significant development requires sophisticated coordination, especially in such a large country as the United States, with numerous police organizations. These organizations are applying a set of national strategic guidelines that attempt to define the division of authority and responsibility, setting crucial cooperation and partnership procedures.

Terrorism is a threat not only on the national but also on the international level. Accordingly, collecting and sharing quality intelligence as well as operational cooperation are essential internationally for law enforcement and intelligence organizations in counterterrorism (Kelling & Bratton, 2006). This is especially true due to the connections between terrorist organizations and the classic hardcore criminal organizations, which requires the police to extend the well-established national and international cooperation on fighting organized crime to the foiling of terrorism.

Tenth Commandment—Educate, Communicate, and Update the Public before, during, and after a Terrorist Event

The most important component of counterterrorism is preserving the population's resilience. An important mechanism for achieving this goal involves maintaining the vital communication channels between the police and the public. The police need to wisely educate and update the public before, during, and after a terrorist event.

Before terror attacks, as part of "target hardening," the police should play a central role in preparing and educating the public. The members of the community need to be part of the defensive alignment, as part of a civil guard or by harnessing the citizens' vigilance as part of an early warning system. Even from an early age, the public needs to be made aware of indicators of possible terrorism events, and be trained to report their suspicions to the police. In Israel, for example, police officers teach children in elementary schools to be attentive toward suspicious people and objects, and to notify an adult or, if possible, a police officer. The police in Israel handle every report/call as if it were an actual explosive device or some other security threat, in spite of the fact that the vast majority of security calls to the police are false alarms. By behaving in such a manner, the police display their responsiveness to the public, who are expected to continue calling because of the potential damage from every terrorist attack (Weisburd et al., 2009). Such responsiveness fosters public confidence in the police, who are thus viewed by the public as responding proficiently to emergencies in matters of counterterrorism (Perry, 2014).

Similarly, in the United Kingdom, the police invest a great deal of effort to encouraging public attentiveness to suspicious behavior (suspicious short-term tenants, suspicious people who have bought or rented a car, etc.). The police there strive to develop appropriate reporting mechanisms, alongside establishing working relationships with the private business community to protect businesses from potential threats and to provide guidance on appropriate security measures (Howard, 2004).

An essential element in preserving public resilience during and after a terrorist event is keeping the vital communication channels between the police and the public open in real time. The territorial commander (or deputy or spokesperson) should report calmly and informatively during and after the attack event via the media. Such ongoing communication in real time reduces distress and fear among the public, and these media briefings prevent damaging rumors, giving the public the safe feeling that things are under control. Such debriefings should provide information such as the description of the event, the areas or roads that have been shut down, and alternative routes (Weisburd et al., 2009).

Conclusion

The most effective counterterrorism strategies concentrate on decreasing the opportunities for terrorist attacks, since this is easier than to diminish terrorist motivation. The "Ten Commandments for Effective Counterterrorism" are mostly situational crime prevention techniques not much different from those that law enforcement deploys against "ordinary" criminals (Clarke & Newman, 2006). Many of the methods and resources required to combat terrorism (before, during, or after such an attack) are regularly utilized by the police in their daily routine. These include: investigation, information and evidence collection; forensics (identification of weapons, explosives, victims, etc.); police-operated call centers and first responders; and police liaison with the private sector, including the issuance of licensing to businesses, traffic control, managing crime scenes, and maintaining or restoring public order. Police are responsive to irregularities in the environments in which they operate routinely, and they look out for situational suspicious indicators that also could be connected to terrorism activities in their communities (Innes, 2006). That is one of the main reasons why, in most countries, the police lead the response to terrorism and have a major responsibility for maintaining public security. The connections between terrorists and other criminals put the police in an exceptional position to collect information, giving them an edge in leading the response to terrorism. Criminals facilitate terrorism with many required tools such as weapons and explosives; documentation; vehicles; collecting, transferring, and laundering money; information; communications; and technology. They even issue subcontracts for specific missions. Terrorist organizations, to finance their activities, have used classic organized-crime illegal activities such as money counterfeiting and the smuggling of drugs, counterfeit goods, and taxable merchandise such as cigarettes.

Even though it is not easy to deal with motivation, we accept that, to deal with terrorism, it is advisable to treat both the motivation and the opportunity to commit a terrorist attack. We recognize that one should not belittle the importance of reducing the factors that foster terrorism, yet these are mostly long-term issues and not typically law enforcement missions. They belong to other disciplines such as political science and economics.

However, as noted, such motivations are often embedded in long-term historical grievances that are not likely to be solved in the short term. In the meanwhile, the "Ten Commandments for Counterterrorism" offer solutions for the short term. Situational terror prevention enables an applicable and effective response, though not a perfect answer. Terror attacks encourage radicalization and create a negative atmosphere that prevents political process; therefore, the effort of situational prevention strategies in preventing terror attacks can help create a positive atmosphere for political process, which can help resolve the conflict. Situational crime prevention also helps to divert terror attacks from sensitive targets (e.g., airports and airplanes).

While discussing these counterterrorism strategies, tactics, and practices, one should give some thought to the inherent tension between preserving democratic principles and counterterrorism measures. Liberal values of democratic societies constrain the state's capacity to take full advantage of potential capabilities that the state has in counterterrorism. Since, the "criminal justice model" for counterterrorism views terrorism as a crime and terrorists as violent criminals, terrorists should be arrested and punished according to the rule of law by the police (best qualified to deal with criminals and crime) and the criminal justice system (Greene & Herzog, 2009). Indeed, Perliger, Hasisi, and Pedahzur (2009) claim that there is strong consensus among scholars that the criminal justice model allows responses to terrorism without seriously undermining the legal and moral

foundations of the democratic system. Accordingly, it is better for democratic countries to leave counterterrorism in the hands of the police, which operate in the civilian arena. By contrast, "the war model" (Greene & Herzog, 2009) characterizes terrorism as an act of war that challenges and threatens the well-being of the state and the political system. As such, this model maintains that the terrorist and the terrorist organization should be eliminated by the use of military forces and intelligence. The utilization of this model would involve military forces conducting combat warfare within their own territory, constituting a severe undermining of human rights and morality of the democratic state and its legal system.

The democratic technological state is required to select procedures and utilize capabilities that will cause minimum damage to human rights. The collection and usage of intelligence is part of the "dirty work" of a democracy, according to Innes (2006). Harming individuals not connected to terrorism or harming fundamental moral principles by using superior capabilities would establish a victory for the terrorists. Misuse of such resources will possibly alienate parts of society, playing into the terrorists' hands (Ganor, 2009). This is especially significant in minority communities that are related ethnically or nationally to terrorist groups (Hasisi et al., 2009). In the end, as Bayley and Weisburd (2009) argue, legitimacy is the foundation of successful policing, whether related to terrorism or to regular crime. Losing police legitimacy jeopardizes public cooperation, which is very much needed in counterterrorism. Importantly, the leading role of police in counterterrorism raises new problems and dilemmas for police forces in democratic countries. Counterterrorism puts emphasis on "high policing," which is characterized by its focus on strategic issues at a macro level, rather than local crime and disorder problems (Bayley & Weisburd, 2009; Weisburd et al., 2009). High policing stresses controlling rather than servicing the public, a position very different from the community policing ideas that have reinforced community–police relationships, especially with minorities. It is difficult to be "officer friendly" and at the same time collect intelligence on suspects who are part of or related to the community (Weisburd et al., 2009). In this context, the "Ten Commandments for Counterterrorism" must be adopted in an environment that respects human rights and recognizes the importance of the legitimacy of public evaluations of police strategies.

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Prosecuting Terrorism post-9/11: Impact of Policy Changes on Case Outcomes

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Introduction

In this chapter, we address the impact of policy changes on the prosecution of terrorism by examining changes to the Attorney General's Guidelines on Investigations, passage of the USA PATRIOT Act, and the use of military tribunals. In addition, we will discuss the perceived successes and shortcomings of these policy changes in terms of their effect on terrorism prosecution.

America's antiterrorism policy has undergone abrupt shifts over the past 35 years, largely in response to terrorist acts. Armored car robberies perpetrated by the radical left in the early 1980s resulted in Congress demanding that the FBI create new strategies to recognize and combat domestic terrorism. Radical Far Right attacks on racial minorities, religious minorities, and homosexuals drew the attention of authorities; federal and state law enforcement agencies raided rural Far Right compounds; and US attorneys pursued highly politicized trials in the mid-1980s. During the 1990s, the World Trade Center bombing and Timothy McVeigh's attack on the Murrah Federal building in Oklahoma City prompted Congress to create legislation that extended the jurisdiction of federal authorities to investigate and prosecute terrorism. However, the most profound impact on American antiterrorism policy occurred in the aftermath of al-Qaeda's attack on September 11, 2001. That event triggered an unprecedented period of policy changes that fundamentally shifted America's approach to terrorism investigations, prosecutions, and punishment.

In the post-9/11 world, prevention became the mantra of the Department of Justice (DOJ). Policymakers from all sectors of the federal government made sweeping and comprehensive changes to immigration policy, border protection, and information gathering and sharing, and they provided more effective tools to law enforcement authorities to investigate terrorism, both domestically and abroad. Congress passed new laws and strengthened existing ones to better enable America to counter future terrorist threats. The creation of fusion centers, the National Counterterrorism Center, and passage of new, less restrictive investigative guidelines by Attorney General Ashcroft reflected this paradigm shift (Smith, Shields, & Damphousse, 2011). Each of these

changes was done in a more coordinated fashion than ever achieved before 9/11, and their impact has been profound.

One of the most important laws created for America's new counterterrorism policy was the USA PATRIOT Act. The Act impacted data sharing among government agencies, enhanced investigative tools to detect and prevent future acts, and authorized stronger detention measures for suspected terrorists. Not withstanding the new emphasis on terrorism, compared with conventional crimes, the number of terrorism cases filed each year remained relatively small. Since 1980, the Federal Bureau of Investigation (FBI) has referred approximately 2,300 individuals for terrorism-related prosecutions, resulting in over 1,100 cases (Terrorism Research Center, 2015). However, nearly two-thirds of those have occurred since 9/11. In addition to changed investigation procedures, conviction rates increased (Shields, 2014) and prison sentences grew longer (Terrorism Trial Report Card, 2012).

Another important component of American policy was reassignment of the FBI. After 9/11, the FBI underwent a dramatic change in not only its mission, but its operating procedures as well. The US Attorney General establishes the procedures that FBI agents use to investigate terrorism and national security incidents. The guidelines implemented after 9/11 shifted the FBI from a reactive law enforcement agency investigating cases with a "criminal predicate," to a more proactive intelligence-gathering agency. The Attorney General's Guidelines twice altered the use of confidential informants (CIs) (2002 and 2008). Toward the end of the decade, the FBI began using informants in a more proactive role, relying more heavily on sting operations.

Policy changes inevitably centered on two crimes that foreign-born terrorists routinely engaged in to carry out attacks in the United States—immigration fraud and financial fraud. Here too, dramatic changes occurred. In the first few years following 9/11, law enforcement cast a wide net and focused considerable attention on identification and visa fraud, as well as financial fraud schemes. Before 9/11, scant attention had been paid to these types of crimes, but in the first 3 years following 9/11, they comprised more than half of all terrorism-related cases (Shields, 2012). That changed in the latter half of the decade as American policy again shifted to meet perceived new threats and placed an emphasis on individuals who provided financial, material, and other types of assistance to terrorist organizations. The new strategy resulted in a higher proportion of "material support" cases and saw the FBI engaging in sting operations. By 2010, according to Greenberg, every jihadist-linked case filed in federal court contained at least one material support charge (Terrorism Trial Report Card, 2010).

America also experimented with military commissions out of concern that civilian criminal trials in federal district courts might not be the best venue to prosecute terrorists, as classified information might be leaked. Military commissions were authorized in 2006, and reauthorized in 2009. To date, military juries have tried only a small number of terrorist defendants, and those cases have been fraught with delays and challenges. Even when convictions have been obtained, the results have been less than what the proponents of military tribunals had hoped for.

Impact of Changes to the Attorney General's Guidelines

The procedures to determine whom the FBI investigates, and under what circumstances, are in many ways as important as the FBI's definition of terrorism (Smith, 1994). Since 1976, the Attorney General's Guidelines have established the parameters for FBI investigations for

all federal crimes in the United States. In 1983, Attorney General William F. Smith, reacting to congressional pressure stemming from a series of armored-car robberies, implemented new rules that directed the FBI to investigate domestic acts of terrorism. The new rules, which replaced the restrictive guidelines put in place by Edward Levi in 1976, permitted the FBI to investigate terror groups for longer periods of time than possible under a general crimes investigation. In addition, a separate set of classified guidelines gave the FBI expanded authority to investigate international terrorists (Smith, 1994).

Following 9/11, Attorney General Ashcroft adopted new rules that expanded the FBI's authority even further. The earlier Smith guidelines had required FBI field offices to refer potential terrorism investigations involving two or more persons to the director or assistant director of the FBI; they, and only they, could authorize a "terrorism enterprise" investigation (Smith, 1994). Once the director authorized a terrorism investigation, he or she had to report that fact to the Office of Intelligence Policy and Review. The Smith guidelines also required the director or another top official to monitor the progress of the investigation at 180-day intervals. Section (B)(4)(a) of the Ashcroft Guidelines loosened those standards by allowing agents in the field to authorize a terrorism investigation for a period of up to 1 year. The field office was required, within 1 year, to report to FBI headquarters any terrorism investigations it initiated, and provide reports (Shields, 2012). The guidelines gave the FBI authority to conduct pre-investigation assessments for extended periods of time. Permission by FBI headquarters to open an investigation, however, was no longer necessary. The new guidelines also centralized the analysis of fieldwork at FBI headquarters. Another shift in policy occurred on May 30, 2002, when Attorney General Ashcroft directed the Executive Office of United States Attorneys (EOUSA) and the FBI to investigate and prosecute suspected terrorists before an act of terrorism could be committed (Shields, 2012).

The Ashcroft Guidelines directly impacted how the FBI conducted investigations after 9/11. Ashcroft extended authority to the FBI to use "undercover techniques" in criminal intelligence investigations (racketeering enterprise and terrorism enterprise investigations) that were previously only allowed in general crimes investigations (Office of the Inspector General, 2005). In keeping with the new proactive policies, Ashcroft stated that, "in obtaining … information, any lawful investigative technique may be used…" (Ashcroft, 2002, p. 17). Ashcroft authorized new directives pertaining to public places and events as well, directing the FBI, for the purpose of detecting or preventing terrorist activities, to visit any place and attend any event open to the public, "on the same terms and conditions as members of the public generally…" (Ashcroft, 2002, p. 22). Lastly, the guidelines allowed the FBI to conduct online searches, and access online forums and sites, just as the public may, for purposes of preventing or detecting terrorism or other criminal activities (The Attorney General Guidelines, 2002). This permitted FBI agents to visit mosques or churches and monitor websites in the course of national security investigations (Lightblau, 2008). In a speech addressing the revisions to the guidelines, Ashcroft (2002) reinforced that the key objective for the FBI was to prevent terrorism by intervening early and investigating aggressively. The DOJ answered the call in 2008, claiming, "The Department continues to act against terror threats as soon as the law, evidence, and unique circumstances of each case permit, using any charge available" (DOJ, 2008a).

The new policy resulted in a significant increase in the number of individuals prosecuted by the DOJ. From 1980 to September 11, 2001, FBI referrals under domestic security/terror investigations resulted in the indictment of 511 defendants in terrorism-related cases; yet, in the 3 years following 9/11, FBI referrals resulted in the indictment of 438 defendants (Shields, 2012). Similarly, studies that focus on jihadist-linked terrorism (to the exclusion of

right-wing, single issue, and environmental cases) report that between 40 defendants per year (see, Aaronson, 2011; Ismail et al., 2014) and 57 defendants per year (see Terrorism Trial Report Card, 2012) were indicted.

Shields (2008) noted that FBI referrals changed after 9/11. Earlier, the FBI included a terror-group association for each individual referred for prosecution. In 2002, the designation "no link to terrorism" was used in a few cases, while others still bore an association. After 2002, the FBI no longer included terror-group associations (p. 20).

The policy changes affected trial outcomes and conviction rates as well. Research on terrorism cases that occurred prior to 9/11 found substantially lower plea bargain rates in terrorism cases than in non-terrorism cases (Smith & Damphousse, 1998), and an overall conviction rate of approximately 80% (Shields, Smith, & Damphousse, 2006). In a more exhaustive study examining the population of pre-9/11 terrorism defendants, Shields (2012) uncovered a stark difference in case outcomes before and after 9/11. Prior to 9/11, terrorism defendants pleaded guilty at a rate of just 44%, jury conviction resulted in 36% of the cases, and another 9% resulted in acquittals, with the remaining 10% of defendants securing dismissals (Shields, 2008, p. 86). That changed dramatically after 9/11. Shields noted a plea rate of 82% during the first 3 years after 9/11, and an overall conviction rate of 89% (p. 87). Unlike the 1980s and 1990s, the conviction rate for terrorism cases from 2002 to 2004 was similar to that in non-terrorism-related federal criminal cases. Additional research reveals that conviction rates have not diminished over the last decade (Terrorism Trial Report Card, 2012; Ismail et al., 2014).

In 2008, Attorney General Mukasey authorized a new set of guidelines. The Mukasey guidelines bolstered the FBI's investigative power by imposing even fewer restrictions. Changes to the 2008 guidelines included the commencement of "assessment investigations" without any factual indication of wrongdoing, or a threat to national security, and they required no notice to be provided to FBI headquarters regarding assessment investigations (Jones, 2009). This is in stark contrast to the policy followed under the Ashcroft guidelines, which required articulable suspicion of wrongdoing before a preliminary investigation could commence (Berman, 2011). While the exact impact of this change is difficult to measure, Savage (2011) reported that, between December 2008 and March 2009 alone, the FBI initiated 11,667 assessments of people and groups.

The Mukasey changes permitted the FBI to engage informants in preliminary investigations, where, previously, informants could only be engaged after a preliminary investigation had been opened (Berman, 2011). Moreover, the Ashcroft guidelines required the FBI to only task "established" informants at the preliminary investigation stage, whereas the Mukasey guidelines permitted the FBI to recruit informants and task them before that stage. Mukasey stated that the guidelines were "necessary … to allow the FBI to transform itself as it is transforming itself into an intelligence gathering organization in addition to just … a crime-solving organization…" (Associated Press, 2008).

The Mukasey guidelines went into effect shortly before Barack Obama won the presidency. During the first 2 years of the Obama administration, the annual number of prosecutions for jihadist-linked terrorism doubled (Terrorism Trial Report Card, 2012). The severity of charges filed in terrorism cases changed significantly over this time as well. As Shields (2012) noted, the years immediately following 9/11 witnessed the government rely heavily on charges for immigration fraud and financial fraud (over half of all cases filed). By 2009, the government began focusing on more serious charges related to national security and terrorism crimes, including weapons of mass destruction possession and training, as well as on material support cases. By 2010, all jihadist-linked cases included a

national security or material support charge (Terrorism Trial Report Card, 2012). Interestingly, the increased severity in charges was accompanied by an increase in FBI sting operations (discussed in more detail in the following text).

Another important change should be noted here. On February 3, 2008, the secretary of state designated the Somalia-based group al-Shabab as a Foreign Terrorist Organization (FTO) (US Department of State, 2015) under provisions of the Antiterrorism and Effective Death Penalty Act. The inclusion of al-Shabab as an FTO was a factor in the increased number of prosecutions in two ways. First, the designation led to 38 al-Shabab-linked individuals indicted since 2009 on material support charges. Second, these individuals were primarily American citizens and represented a significant proportion of the "spike" in homegrown terrorism cases observed since 2009 (Terrorism Trial Report Card, 2012).

Impact of the USA PATRIOT Act

The *Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001* (USA PATRIOT Act) impacted the government's response to terrorism in many ways. Signed into law in October 2001, it expanded law enforcement authority to investigate suspected terrorists, tightened immigration rules, loosened restrictions on surveillance procedures, strengthened controls on international money laundering, and authorized disclosure of foreign intelligence information obtained in criminal investigations to intelligence and law enforcement agencies. Implementation of the policies rests with the executive branch in four distinct chains of command. The first begins with the president and extends to the National Security Counsel, which is responsible for enforcing international terrorism policy (Perl, 2003). The second runs from the president to the director of the Department of Homeland Security. The third runs from the president to the secretary of state, who heads the US State Department, which contains the Office of the Coordinator for Counterterrorism. The fourth chain runs from the president to the US attorney general, who heads the DOJ. It is through the DOJ that policies centered on the investigation and prosecution of terrorism are crafted and implemented, as both the FBI and the EOUSA are agencies of the DOJ. In the sections that follow, we will address three substantive changes that occurred as a result of and in conjunction with the USA PATRIOT Act: the changed use of CIs in terrorism investigations, changes made to immigration policy, and the increased focus on material support cases.

Investigation Policy—CI Guidelines

One important area affected directly and indirectly by the USA PATRIOT Act was surveillance and information gathering. The USA PATRIOT Act increased awards granted to informants who aided in the arrest or conviction of individuals conspiring or attempting to commit an act of terrorism (Kash, 2002). The awards program, initially created under President Regan via the 1984 Act to Combat International Terrorism, enabled the FBI to change the way in which it used human intelligence, permitting payments of up to $250,000 to CIs without presidential approval (where similar payments were previously limited to $100,000). With the enhanced rewards program in place, the attorney general modified the guidelines on CIs and ushered in a new era of human intelligence. But first, it is important to understand the role of CIs in federal investigations.

In 1978, FBI director William Webster stated, unequivocally, that CIs were the most effective tool in law enforcement (Department of Justice, 2005). As the literature suggests, the change in the use of CIs has impacted the ways in which terrorism cases were processed after 9/11 (see, e.g., Shields, 2012). The 2002 Ashcroft guidelines regarding the use of CIs contained several revisions. The first change involved reading instructions to informants. Under the Ashcroft guidelines, agents working with CIs were required to read, verbatim, specific instructions concerning the boundaries set on the CIs' activities (Office of the Inspector General, 2005). The 2002 revision eliminated the verbatim reading requirement, mandating only that one member of a Joint Law Enforcement Agency and one witness review written instructions with CIs (The Attorney General's Guidelines regarding the use of confidential informants, 2002). FBI director Robert Mueller deemed this change necessary because "the verbatim instructions, written in often intimidating legalese, were proving to have a chilling effect, causing confidential informants to leave the program" (Oversight Hearing, 2003).

The second change to the CI Guidelines permitted agents to mold the instructions, including instructions that safeguard the confidentiality of the informant's identity, to the informant's unique situation (Office of the Inspector General, 2005). A further modification to the informant guidelines involved limitations on promises of immunity from prosecution. Prior guidelines required agents handling CIs to instruct them that investigative agencies could not promise immunity from prosecution (Department of Justice, 2005). The 2002 guidelines clarified agents' roles, giving agents no additional authority to promise immunity, but the new instructions appear to have relaxed the instruction requirement, stating, "[w]hether or not this instruction is given to a CI, the [Justice Law Enforcement Agency] does not have any authority to make any promise or commitment that would prevent the government from prosecuting an individual … and a JLEA agent must avoid giving any person the erroneous impression that he or she has such authority" (The Attorney General's Guidelines regarding the use of confidential informants, 2002, p. 12). A further change in the guidelines permitted the FBI to recruit informants from "a particular community without any articulable suspicion of criminal activity, in contrast to previous limits" (Ismail et al., 2014, p. 15).

Similarly, changes to the Undercover Operations Guidelines emphasized terrorism prevention as a legitimate goal of undercover operations. The 2002 guidelines stated that the use of undercover agents was essential to the detection, prevention, and prosecution of terrorism (The Attorney General's Guidelines on FBI's Undercover Operations, 2002, p. 1). The guidelines also granted explicit authority to the FBI to use undercover agents in terrorism investigations, and they provided the special agents in charge the authority to approve of an undercover operation when it was "necessary to avoid the loss of a significant investigative opportunity" (p. 15).

Notwithstanding the spate of new authority, the use of CIs and undercover agents decreased in the first few years after 9/11 (Shields, 2012; Shields, Smith, & Damphousse, 2009; see also Terrorism Trial Report Card, 2012). Between 2001 and 2004, the proportion of terrorism cases that used CIs stood at 20%, compared with 58% from 1980 to 2001 (Shields, 2012, pp. 98–99). The drop in the proportion of cases using CIs was potentially affected by Attorney General Ashcroft's mandate to the FBI and the EOUSA to investigate and prosecute cases sooner in an effort to disrupt terrorist activity (Shields, 2012). However, the decreased use of CIs did not last. By the middle of the decade, the FBI was again developing CIs in terrorism investigations.

After the initial downturn following 9/11, the FBI increased the number of CIs in its counterterrorism network, with real emphasis beginning in 2004. That year, the FBI began recruiting CIs under the *Intelligence Reform and Terrorism Prevention Act of 2004.*

Just 3 years later, the FBI requested increased funding to better manage the vast network of CIs (FBI, 2007). The proportion of cases involving CIs rose to nearly 50% by the time the Mukasey guidelines were adopted in 2008 (Terrorism Trial Report Card, 2011). The FBI does not generally divulge the number of CIs it utilizes. In fact, the FBI last reported the number of paid informants in 1980 (2,800). In 1986, estimates suggest the FBI operated with more than twice the number it had 4 years earlier (6,000) (Ostrow & Jackson, 1986). By 2008, the number of informants had once again grown two-and-a-half times, to more than 15,000 (Department of Justice, 2008b).

The way in which the FBI used informants changed as well, reflecting the proactive nature of post-9/11 investigations and new authorizations created by the USA PATRIOT Act. The FBI no longer focused solely on individuals and groups that were engaged in terrorist activity, but had begun seeking out those who would agree to participate in terrorism if the incentives were strong enough (Terrorism Trial Report Card, 2011, p 4). Some research suggests that one-third of post-9/11 jihadist-linked terrorism arrests were the result of sting operations, and that 10% of arrests involved an operation led by an FBI informant (Aaronson, 2011). Between 2001 and 2011, 10 defendants unsuccessfully raised the entrapment defense (Terrorism Trial Report Card, 2011). During that same time frame, all but four of the high-profile domestic terrorism plots reported by the DOJ were the result of sting operations (Ismail et al., 2014, p. 21). Sting operations have met with criticism from the Muslim community and civil rights groups alike (Glionna, 2014; Markson, 2010), but a change in policy does not appear to be on the horizon (Holder, 2010).

Immigration Policy

Immigration reform was an inevitable consequence of the 9/11 attacks, as all the hijackers had entered the United States with student and visitor visas. Kephart (2005) found that, of the 94 foreign-born terrorists who operated in the United States between 1990 and 2004, two-thirds (59%) had committed immigration fraud, and many had committed multiple violations. In 13 instances, those individuals had overstayed their temporary visas, and 16 had become permanent residents. Moreover, the risk posed by US immigration policy was well documented prior to 9/11. Counterterrorism proposals from Immigration and Naturalization Services (INS) had been submitted in 1986, 1995, and 1997, but no action was taken on them (National Commission on Terrorist Attacks upon the United States, 2004, pp. 80–81).

In the aftermath of the 9/11 attacks, Congress passed several measures to enhance border security, increase data collection and information sharing, and broaden the government's power to detain and deport immigrants. Just 8 days after 9/11, the Bush administration submitted to Congress the *Anti-Terrorism Act of 2001*, which provided for increased authority of domestic intelligence gathering in money-laundering schemes used in terrorist financing, and a streamlined set of rules for judicial procedures for deporting suspected terrorists (Rosenblum, 2011). Eventually, that act would be amended to include sunset provisions placing 2-year limits on the due process and indefinite detention provisions, and later passed as the USA PATRIOT Act (Rosenblum, 2011).

The USA PATRIOT Act mandated that the FBI provide criminal records to INS and State Department officials during visa screening. In May 2002, Congress passed the *Enhanced Border Security and Visa Entry Reform Act*, which mandated even more data sharing and accelerated implementation of foreign student and entry–exit tracking systems (107th Congress, 2002).

The impact of immigration policy changes on terrorism prosecutions has been significant. Chesney (2007) examined federal terrorism cases following 9/11 in the light of claims that the DOJ was overestimating the number of terrorism cases it had been prosecuting. Chesney argued that the FBI and the EOUSA reacted to the policy shift after 9/11 by focusing on the types of crimes (immigration violations and financial fraud) in which jihadist-linked terrorists were known to engage in prior to carrying out attacks. Referring to these as *diffusion* cases, Chesney asserted that, because many extremists engage in these crimes as preparatory acts, vigorous prosecution of all offenses of this nature would interrupt terrorist planning and diffuse terrorist attacks.

Using Chesney's typology, Shields (2012) examined pre- and post-9/11 terrorism cases from 1980 to 2004, distinguishing any case labeled as terrorism-related by the FBI (but containing no link to a group, ideology, or planned act of terrorism) as a diffusion case. He found that 85% of all diffusion cases involved charges of identity fraud, immigration violations, or some form of financial fraud. Shields also determined that the FBI had identified no such cases prior to 9/11, but that diffusion cases comprised 53% of FBI-identified terrorism cases between 2001 and 2004 (Shields, 2012, p. 85). As discussed in the preceding text, that trend appears to have changed in subsequent years as the FBI continued to transform itself into a more proactive intelligence agency and shifted its focus to sting operations.

Material Support and the AEDPA

The move to prohibit individuals from providing material and financial support to terrorist groups developed from policy changes implemented after the 1993 World Trade Center bombing and the 1995 Oklahoma City bombing. In 1996, Congress passed the *Antiterrorism and Effective Death Penalty Act* (AEDPA), which, among other things, modified habeas corpus proceedings by limiting the procedural and substantive scope of writs; established mandatory victim restitution; and, under Title III, provided the government with the ability to designate Foreign Terrorist Organizations (FTOs) and punish efforts to financially support them (104th Congress, 1996). The AEDPA also raised several terrorism-related offenses to the level of federal jurisdiction (Giraldo & Trinkunas, 2007), providing for harsher sentences and exposing perpetrators to the full investigative capacity of the federal government.

The AEDPA was a necessary policy change brought about by the collapse of the Soviet Union and globalization. Before the end of Cold War, major international terrorist groups were dependent on state sponsorship (Giraldo & Trinkunas, 2007). By the early 1990s, these groups were forced to become more self-sufficient and turned to charities, criminal behavior, and other schemes to finance their operations. Globalization permitted terrorists to utilize the increasingly integrated world financial system, provided increased opportunities for moving personnel around the globe, and enhanced communications.

The USA PATRIOT Act broadened the definitions of material support to include almost any kind of support provided to listed organizations, including humanitarian aid, training, expert advice, services, and political advocacy. These provisions are found under title 18, section 2339B, et. seq. in the United State Code; they increased the maximum term of imprisonment from 10 to 15 years (or life in prison if a death resulted) and subjected attempts and conspiracies to the same maximum punishment as a substantive violation.

Prior to 9/11, investigating terrorism financing was neither a priority for the FBI, nor was it addressed with any sense of urgency (Eckert, 2008). Yager (2005) noted that, before 9/11,

the FBI did not systematically collect or analyze data on terrorism financing, which hindered the bureau's ability to counter financing mechanisms. In an attempt to address this shortcoming, the government began devoting considerable attention to terrorism financing. What it found in the years following 9/11 was that terrorist groups were becoming even more self-sufficient—exploiting sources of funding that "require neither ideological sympathy nor consent of [donors]," such as charities (Giraldo & Trinkunas, 2007). The depth and diversity of financing schemes concerned policymakers, so considerably more focus was placed on this issue. In 2008, the DOJ said its use of material support statutes (18 USC 2339A, et. seq.) had "formed a critical component of the Department's overall terrorist prosecutorial efforts, allowing prosecutors to target … terrorists and intervene during early stages of terrorist planning" (Department of Justice, 2008a). Literature on the subject verifies this assertion.

In a study of 328 defendants in material support cases, Parrott (2009) determined that the FBI became adept at intercepting wire transfers and placed the greatest effort on seizing assets. Accordingly, groups tried to adapt to the increased scrutiny by relying more heavily on conventional criminality for fundraising (Passas, 2007; Williams, 2007). While terrorist financing schemes continued to rely heavily on charities and wire transfers in the post-9/11 era, offenders who did engage in conventional criminality chose crimes that required skill and expertise, such as smuggling and arms trading, rather than kidnapping, robbery, or extortion (Parrott, 2009, p. 55). The FBI's emphasis on material support is telling. Since 2007, charges of Material Support for Terrorists (18 USC 2339A) and Material Support for Terrorist Groups (18 USC 2339B) are the two most frequently indicted charges in jihadist-linked terrorism cases. In 2011, 87.5% of those cases included a material support count (Terrorism Trial Report Card, 2012, p. 18).

Military Commissions

Another policy change ushered in by the 9/11 attacks was the authorization of military commissions, or tribunals, to try terrorist defendants in lieu of federal criminal courts. Military commissions are different from federal criminal courts, in that military officers act as both judge and jury. Guilt is determined by a vote of "commissioners," but it does not have to be unanimous (except in death penalty cases). In addition, military commissions have a more relaxed standard for admitting evidence and permitting hearsay and coerced confessions that civilian criminal courts would exclude (Elsea, 2014a).

Military commissions became a popular option for some policymakers (Zimmermann, 2010) out of fear that sensitive classified information might be revealed if terrorist defendants were tried in civilian criminal courts. Advocates of military commissions have argued that federal criminal courts are poorly equipped to handle cases involving classified evidence, and have routinely criticized the *Classified Information Procedures Act*, the primary tool in dealing with classified material in federal courts, as insufficient to protect national secrets (Litt & Bennett, 2009). In contrast, critics have argued that military commissions would set a bad precedent by establishing an alternative judicial system, one largely hidden from public scrutiny, and one without the experience or the long history of legal precedent to function smoothly while applying federal criminal statutes (Constitutional Rights Foundation, n.d).

On November 13, 2001, President Bush authorized military tribunals by executive order. The Supreme Court struck down the order, citing the president's lack of authority to create

a separate court system (Sutton, 2011). On October 17, 2006, Congress passed, and President Bush signed, the *Military Commissions Act of 2006* (MCA), which provided statutory authority to try "enemy combatants" for violations of the laws of war. The MCA was successfully reauthorized in 2009 (Elsea, 2014b). The MCA established a commission system that set forth procedures for military commissions. The Justice Department provided a team, comprised of attorneys and paralegals from Assistant US Attorney's offices and from the National Security Division, to support the Chief Prosecutor for the Office of Military Commissions as it investigated and prosecuted military commission cases. The DOJ also devoted extensive Justice Department resources and personnel to defend against challenges to detention brought in federal civilian court by detainees (Department of Justice, 2008a).

In the 8 years since the passage of the MCA, only eight detainees from among the 780 men taken to Guantanamo have been tried and convicted, and only three of the eight convicted terrorists remain in prison (Williams, 2015). Criticism has mounted concerning the length of prison sentences meted out by military tribunals in those cases as compared with similar cases in civilian criminal courts (Gude, 2010). Elliot (2010) pointed to the case of Australian-born David Hicks, who was among the first persons tried under the MCA. Convicted of providing material support to terrorism, a military commission sentenced Hicks to 7 years, with all but 9 months suspended. Elliot noted that John Walker Lindh, the American Taliban, was convicted and sentenced in a federal criminal court on comparable charges and received 20 years in prison. A military commission convicted Salim Hamdan, Osama bin Laden's driver, of material support in 2008, and sent him back to Yemen, where he was released from jail in January 2009 (Holan, 2010). In 2009, a military jury handed down the stiffest sentence in an MCA-prosecuted terrorism case to Ali Hamza, who made propaganda videos for al-Qaeda. It should be noted that Hamza admitted during trial that he helped plan the 9/11 attacks, and he refused to allow his defense attorneys to put on a defense (Holan, 2010). Nonetheless, Hamza was convicted under the MCA and sentenced to life.

The most notorious MCA case, and the longest running, involves Khalid Sheikh Mohammed, mastermind of the 9/11 attacks. Two military trials have been commenced against Mohammed and four co-defendants. The military commission dismissed the first case in 2008 (Herridge, 2010). The second attempt began with pre-trial hearings in 2012 ("Khalid Sheikh Mohammad Guantanamo," 2012), and was still bogged down in pre-trial proceedings as this chapter was being prepared.

Summary

The federal government reacted to 9/11 by enacting new laws and strengthening existing ones. Policymakers sought to better secure America's borders by plugging holes in immigration policy. Congress provided immigration officials with more streamlined procedures for investigating and deporting foreign nationals, and legislators made the job of assessment easier by mandating information sharing between agencies. Indeed, intelligence gathering and sharing became a cornerstone of the post-9/11 strategy. With a focus on how terror groups operate, efforts to curtail and prosecute terror financing emerged as well. By the end of the decade following 9/11, federal prosecutors were filing more material support charges than ever before.

Attorney General Ashcroft set about to change the mission of the FBI by transforming its operational role from a primarily "reactive" law enforcement agency, to a proactive intelligence

agency. Ashcroft's successor, Michael Mukasey, helped to complete that transformation, giving the FBI even more authority to investigate potential terrorist threats. That new authority has culminated in proactive strategies, with the FBI cultivating CIs before official investigations have even begun. While the proportion of cases using informants has yet to eclipse pre-9/11 levels, the nature of the cases being prosecuted has changed profoundly. In the last decade, informants have actively helped the FBI complete dozens of sting operations. Sting operations have resulted in several high-profile arrests, but they have also created controversy. Scholars, human rights activists, and members of the Muslim community have questioned the utility and ethics of informant-led plots (e.g., Lulo, 2014; Harris, 2011; Said, 2010).

Not all of America's policies have met expectations. The government's attempt to use military commissions to try terrorists has resulted in few trials and relatively light sentences for those convicted. By contrast, many of America's other post-9/11 policies have met the expectations of their creators. The number of individuals indicted each year for terrorism-related crimes more than doubled after 9/11, and the conviction rate for terrorism cases increased from 80% to 89%. While it is true that, in the years immediately following the 9/11 attack, the majority of cases involved less severe immigration and fraud charges, the severity of charges has been steadily increasing since 2004, yet the conviction rate remains higher than pre-9/11 levels.

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Prisons: Their Role in Creating and Containing Terrorists

Margaret A. Zahn

There are two major issues regarding prisons and terrorism that have become very salient since 9/11. The first involves radicalization within prisons, with attention to the question of whether prisons increase the number of people willing to engage in terrorist acts, and, if so, how this occurs. The assumption is that prisons are schools of crime, and, as such, may also be schools for radicalization and terrorism. The second question is how those accused or convicted of terrorist activity should be handled in confinement. This chapter will review material available on each of these subjects, as well as the theoretical and methodological issues involved in them.

Do Prisons Create Terrorists?

Since 9/11, there have been many suggestions that prisons in the United States and Europe do radicalize and create terrorists. The suggestions are based primarily on the high level of conversions in prisons to Islamic religions and the conflation of conversion and radicalization. As prisons in the United States do not routinely record the religions of prisoners, the actual number of people converted to any specific religion in prisons is unknown. However, research indicates that Islam is the fastest-growing religion among prisoners in Western nations. In the United States, the yearly number of conversions to Islam in municipal, state, and federal prisons is estimated at 30,000 (Dix-Richardson & Close, 2002), with roughly 240,000 inmates having already converted to the faith since the 9/11 attacks (Hamm, 2009).

The number of conversions to or participation in the Islamic faith is also high among prisoners in other Western nations (see Spalek & Salah el-Hassan, 2007, for a discussion of this in Great Britain). Based on these kinds of figures, the issue of radicalization in prisons has been raised as a major area of concern. Cilluffo et al. (2006), in testimony before the US Senate, indicated that concern for the issue is important, and he cited select cases that reviewed connections between former/current prisoners and terrorism. Cases cited included Richard Reid (the shoe bomber radicalized in a British prison), attacks devised inside New Folsom State Prison, and a number of others. His assessment was based on a

task force report on literature reviews and briefings from professionals, conducted by the George Washington University Homeland Security Policy Institute (HSPI) and the University of Virginia's Critical Incident Analysis Group (CIAG), and suggested that there was insufficient information about prisoner radicalization to quantify the threat—however, the need to do so is strong. A subsequent congressional hearing reiterated the threat via testimony before the House Committee on Homeland Security in 2011 (Dunleavy, 2011). The political assessment of the role of prisons in creating terrorists tends to conflate conversion with radicalization and fails to take into account the many years of research into the positive effects of prison conversions. Furthermore, the limited number of studies done in the United States, to be reviewed in the text that follows, show that the number of prisoners who become terrorists in prison are relatively few—however, as Mark Hamm (2013), an expert in this area, suggests, they are the "Spectacular Few."

Conversion, Radicalization, and Terrorism

To evaluate whether prisons "radicalize" prisoners, it is important to first conceptualize radicalization. Further, given the contention that there is an association with religious conversion, conceptualization of conversion is important as well. There is an extensive discussion in the literature of the ambiguous concept of radicalization (see, e.g., Schmid, 2013; Neumann, 2013). In relation to prison studies, Neumann's distinction of conceptual radicalization (an emphasis on beliefs) and behavioral radicalization (extremist behavior) seems useful. Cognitive radicalization seems closest to the notion of conversion as used in prison studies. Borum (2011a), in a review of conversion theory, suggests that conversion involves a state of crisis—that is, personal disequilibrium typically caused by personal or social disruption; followed by quest for a solution; an encounter between the seeker and a spiritual option; followed by interaction, commitment, and, ultimately, consequences (p. 23). He suggests that radicalization and conversion are alike, in that both are a process rather than an event. Further, the process is likely to be affected by cultural, historical, political, and social processes operating through the conversion process. How such factors work in contemporary US prisons is shown in a recent study by Hamm (2007).

Based on interviews regarding the process of religious conversion with prison chaplains, gang intelligence officials, and 30 prisoners incarcerated for violent crimes in Florida and California prisons, Hamm found that there were a number of different types of converts: the crisis convert, protection-seeking convert, searching convert, manipulating convert (become religious for manipulative purposes, such as special diets, access to books), and free-world-recruited convert. As to the types, chaplains agreed that crisis conversion is rare among inmates as inmate culture frowns on weakness, and personal crisis is seen as weakness. Only two prisoners (both white) were crisis converts. There was unanimous agreement that most black inmates join religious groups for protection; as one said, "most Islamic prisoners are just looking for protection and a place to belong." Joining a non-traditional religion (and there are many different non-traditional religions) generally reduces the predatory, expletive, and fatalistic behavior normally required to survive in prison. Using Hamm's terms, inmates are converted through friendship networks, and prisoner radicalization cannot be separated from prison gangs in the two prisons that Hamm studied.

One of the case studies that Hamm includes is instructive. In August 2005, four men were indicted in Orange County, California, for a terror plot in connection with a radical Muslim group known as Jam'iyyat Ul-Islam Is-Saheeh, or JIS, founded by one of the men indicted.

The JIS case, the only known case where terrorist plots were developed in a prison and enacted by released prisoners and outside affiliates, was examined in the Hamm study. Charismatic leadership and one-on-one proselytizing were established to be the key individual-level factors associated with the JIS case. And prison overcrowding was deemed to be the key institutional-level factor exacerbating potential for increased threat of terrorist recruitment in prison (a factor that will be more fully examined in a subsequent section). How studies of conversion and various types of converts are related to the issue of radicalization in prisons is an issue needing further examination.

Other evidence for the relationship between prison experience and radicalization, focusing more on behavioral outcomes, were found in the studies discussed in the following text. Hamm (2013) constructed a Prisoner Radicalization/Terrorism Database from open sources, including newspapers, prisoner memoirs, government reports, and court documents. The database consisted of 51 cases of prisoners in the United States, Britain, France, and Spain who had not committed terrorist acts prior to their entrance into prison but were considered to have done so following confinement. The cases covered 43 years, from 1968 to 2001, and the lag time between radicalization and a terrorist attack was 5 or more years in a quarter of the cases (in one case, 24 years). While certain traumatic experiences certainly can have long-term delayed effects, the lengthy lag time between prison experience and terrorist attack makes drawing direct links between prison experience and terrorist outcome problematic. Further, while many of the cases in the database clearly represent terrorist violence, others—for example, a bank robbery and the murder of a police officer—are more difficult to classify as terrorist violence as opposed to "regular violent crime" (for additional review, see Zahn, 2015). Despite these methodological limitations, Hamm's important study found that most prison conversions did not turn into terrorist action; when they did, such action was most associated with charismatic leaders who drew inmates to their causes and had some association with gang subcultures. Given the large number of people imprisoned during this time, the evidence here suggested that prisons create few terrorists; however, they are, as he indicates "the spectacular few."

A 50-state survey of prison chaplains, conducted in 2011 using the Internet and paper questionnaires, also found low levels of radicalization (Pew Research Center, 2012). Only 12% of chaplains indicated that religious extremism was very common, while 29% said that the phenomena were somewhat common, especially among Muslim inmates. An overwhelming majority reported, however, that religious extremism seldom poses a threat to the security of the facility, with only 4% saying that religious extremism among inmates almost always poses a threat to prison security. How this would relate to external terrorist behavior was not evaluated ("Religion in Prisons," Pew Research Center, 2012).

Useem and Clayton's (2009) work on the radicalization of prisoners was based on interviews with 210 prison officials and 270 inmates in 10 men's state correctional departments and one municipal jail system during 2006–2009. They also found little evidence of jihadist radicalization, and suggested that alarms about prisoner radicalization have been raised mostly by intelligence community analysts who overstate the magnitude of the threat. Further, some policymakers fail to account for the social organization of prisons. Useem and Clayton's interviews found that numerous inmates were very patriotic and did not delight in the prospect of damage to the country. Interviews with prison staff also reported little to no radicalization. Staff indicated that prisoners have their own "beefs" that have more to do with segregation and the history of US racism than with Sharia or Osama bin Laden (Useem & Clayton, 2009). They go on to argue, based on these data, case studies, and

prior work on prisons, that low levels of radicalization is produced by four factors: (1) the increase of order in prisons, (2) the creation of a boundary between prison and potentially radicalizing communities, (3) the efforts by agency leadership to infuse prisons with an anti-radicalization mission, and (4) the educational profile of inmates (Useem & Clayton, 2009, p. 568).

These studies shed light on the impact of prisons on radicalization and terrorist outcomes; however, much additional conceptual and empirical work needs to occur. The process by which prisoners develop radical beliefs, the measurement of risk, and examination of why so few of similarly situated persons actually resort to violent terrorist actions are avenues for further pursuit. Many other researchers are now attempting to define the process by which prisoners develop radical beliefs (see, e.g., Borum, 2014; Mulcahy, Merrington, & Bell, 2013; Sinai, 2014). Studies do not generally have any information on attitudinal or relevant psychosocial variables upon entry to prison, and this problem needs attention. Further, as Silke (2014, p. 108) notes, "our understanding of the risk assessment of terrorist and extremist prisoners is in its infancy, yet this is clearly a critical issue." There has been some development of risk assessment instruments for terrorists and violent extremists. As Pressman and Flockton note, it is essential that the risk assessment protocols for terrorists and violent extremists not be the same as those known as psychiatric risk assessments linked to known criminogenic risk indicators. The Vera-2 (Violent Extremism Risk Assessment) has been developed to deal with this issue, and some preliminary use of it has been done in Australian prisons (Pressman & Flockton, 2014, pp. 122–143). Future studies, however, need to examine those entering prisons with such instruments, as well as changes as time in prison progresses. Further, while the evidence thus far suggests low levels of terrorism resulting from current US prisons, most studies do not do a direct comparison between those with violent versus non-violent radicalization. Bartlett and Miller (2012) suggest that most studies have focused on the small number of known terrorists, from which most comparisons about conditions likely to conduce their actions are drawn, omitting a comparison group of non-terrorist radicals. Their findings are based on 61 in-depth profiles of terrorist cell members convicted of terrorism and currently serving time in Canada and Europe. Because they were not permitted to interview prisoners for legal reasons, the researchers instead conducted interviews with people who knew the prisoners, and also relied on court transcripts and newspaper reports. The comparison group was interviews with 28 radicals, those who held views sufficiently different from country-wide orthodoxy, and who also had some social connection or association with the convicted terrorists within the sample. A reflective cross section of 70 young Canadian Muslims was also interviewed via focus groups. Across the groups, non-violent radicals as well as violent ones shared strong distrust of government, and believed conspiracy theories about it. A deep outrage with Western foreign policy was unanimous. Some differences between the violent radical and the non-violent was in watching of violent films and videos, which the violent radicals did in groups, and the emphasis on improved status and bragging rights, which were associated with violent outcomes. Peer pressure to demonstrate greater courage in support of terrorist beliefs was associated with violent outcomes versus simply radical beliefs.

This study demonstrates both the need for comparison groups of those who believe in radical views and those who use political violence to sustain them, and the role that prisons play in the differences. Additionally, as a number of experts suggest (Useem & Clayton, 2009; Hamm, 2013; Neumann, 2013), prisons are not uni-dimensional; it is their structural differences that may most affect terrorist outcomes.

Prison Characteristics and Terrorist Outcomes

While prisons share a characteristic of holding people in confinement, they vary in many ways, and the variations are most important in examining the relationship between prisons and the development of terrorist behavior. Useem and Clayton (2009) suggest, based on studies of US prisons, that characteristics of the prison as well as characteristics of prisoners affect the likelihood of development of terrorist recruitment and action. They found a low propensity for planning of terrorist plots while in prison. Order and stability in the prison, policies hampering importation of radicalization materials, correctional leadership with infused anti-radicalization strategies, and low levels of inmates' education were associated with low levels of terrorist ideologies. They suggest that the level of educational background of US prisoners is an important variable, because education leads to people becoming concerned about the issues of the day, rather than simply self-interest, and radicalized individuals have broader interests than the non-radicalized population.

Williams (2015) studied two maximum-security prisons in Britain, with surveys, interviews and fieldwork, and found that prisons differed in how just or fair prisoners perceived them to be. Fair treatment of one group of prisoners over another, inconsistent policies, lack of family contact, and quality of relationships with staff contributed to whether prisoners perceived the prisons—and, by extension, the state—as legitimate: underlining again the conclusion that some prison characteristics are associated with likelihood to develop terrorist ideas and activities.

Based on a random survey of staff in 114 federal prisons in 2007, Bierie (2012) found that poor physical conditions, noise, clutter, dilapidation, and lack of privacy related to significantly higher rates of serious violence in prison. While violence in prison may not be associated with subsequent political violence, his research demonstrates the importance of knowing the variation in prison conditions for behavioral outcomes. Jones (2014) also suggests that a number of prison factors may undermine terrorist offender's efforts to recruit other prisoners to radical endeavors. These factors include the prison environment, inmate culture, racism, and social barriers (i.e., anti-Islamic attitudes and behavior). His case study analysis of prisons in the United States, Pakistan, the Philippines, and Indonesia demonstrates the vast differences between correctional systems, including ways of managing and confining inmates, standards of incarceration, degrees of control over inmate populations, and levels of staff integrity and professionalism. Further, he notes that prisons are located in countries and regions of countries with diverse religious, cultural, and political backgrounds, all of which may influence the development of terrorists within their walls. As he indicates, all inmates are exposed to the "pains of imprisonment," but how they cope with these depends a great deal on the characteristics of the prison that they enter and the external context that surrounds it. For example, some prisons are much more porous with the outside world, allowing families and friends to bring in food and supplies, while others are not. The results for the development of potential terrorist group and individual development are thus impacted. Further, while these particular articles do not deal with specific procedures in prisons, such as the use of torture, case studies of, for example, Ayman al-Zawahiri (a leader of al-Qaeda, as of this writing) (Hamm, 2013, p. 99) and Abu Musab al-Zarqawi (an AQI leader who was allegedly tortured in a Jordanian prison; www.theatlantic.com/magazine/archive/2006/07/304983) demonstrate the potential impact of torture in prisons as a causal factor in subsequent violence against political targets. Hamm also indicates that factors associated with radicalization within prisons include: overcrowding, a lack of rehabilitative programs, and a shortage of chaplains to provide guidance.

Theoretical and Methodological Issues

While much of the literature on radicalization in prisons use individual-level theoretical approaches (e.g., the theory of significance), structural theories that discuss the differential structures of prisons may assist greatly in understanding the factors that make certain prisons the centers of terrorist recruitment. Coercion as a cause of crime has emerged as a potential factor in violent crime in recent years (Unnever, Colvin, & Cullen, 2004). Its relationship to prison and its impact on prisoners are outlined and examined in the differential coercion and social support theory as applied to prison organizations (Colvin, 2007). As suggested, prisons are areas where coercion and its impact are more apparent than in most other forms of human organization. Its effects (review in Day, Brauer, & Butler, 2014) increase antagonism to authority and violent or aggressive response. It is hypothesized, however, that those effects can be ameliorated by social support (e.g., the delivery of assistance from communities, social networks, and confiding partners in meeting instrument and expressive need for individuals) (Colvin, 2007; Colvin, Cullen, & Ven, 2002; Lin & Dumin, 1986). A seminal study in the United States of the case of the penitentiary of New Mexico (Colvin, 2007) found that inconsistent application of highly coercive practices coupled with no social support led to extensive and brutal violence in inmate populations—antagonism to authority was intensified. These findings are further supported by a survey of personnel in 114 federal US prisons that found noise, clutter, dilapidation, lack of privacy, and poor physical conditions corresponded with significantly higher rates of serious in-prison violence (Bierie, 2012). Framing studies of prisons and their potential for production of terrorism within such a theoretical context may enhance the accumulation of knowledge in this field.

There are also many methodological problems in conducting research on the role of prisons in creating terrorists. First, if persons are incarcerated for terrorist acts, it is difficult to secure permission to interview them, and perhaps to even collect information from their records. Thus, many times, information on those who have committed terrorist acts or those who have been "converted" to terrorist acts while in prison stem from either autobiographical accounts or from newspaper accounts. Where databases are used, inter-rater reliability is seldom examined, and when the databases are secured from varying news sources from varying points in time, seldom are the problems of differential reporting and changes in reporting practices over time examined (for more discussion of these issues, see Freilich et al. 2014)

Further, to study the process of change, initial risk assessment or baseline information is needed, and, again, this is difficult to secure, either in the United States or elsewhere. At times, also, demographic variables—for example, religion or race—are used, and assumptions are made regarding the meaning of the demographics, without any further knowledge of individuals. Further, employing non-terrorist comparison groups would be of great value, but is almost nonexistent in the current literature. These difficulties are exacerbated when attempts are made to examine prison context in relation to the development of prison radicalization in non-Western countries. In addition to potential language barriers, as well as the difficulties in securing access to prison populations, prison conditions in some situations are so overcrowded and understaffed that access is not feasible, and safety issues are a major impediment. Data from the International Centre for Prison Studies (ICPS) is of value in cross-national prison studies and could be used more extensively in future research. The ICPS was established in 1997 and conducts research on prisons and imprisonment in (presently) 218 independent countries and dependent territories. Using varying data

sources, with most deriving from the national prison administration of the country involved, the ICPS database provides information on prison population rates, extent of pre-trial imprisonment, and prison overcrowding in participating countries. Other relevant reports on individual countries, for example, from the US State Department Human Rights Country Reports, are also included on their website (see www.prisonstudies.org).

Confinement Policies

The second major area of research in corrections and terrorism is how those held on charges of terrorism should be confined and what the results of various types of confinement are. Neumann (2010), in an important report, describes three approaches used for the housing of terrorists: dispersal, concentration, and isolation. All prison systems must decide whether prisoners should be held in one place (concentration); whether they should be separated from the general prison population (separation); and if they should be isolated from each other (isolation). Policies regarding the housing of such prisoners are cognizant of the potential for these prisoners to attempt to actively recruit other inmates for their mission, and the fact that politically motivated prisoners are often deemed to be different from other prisoners in their ability to mobilize outside support, create operational command structures, and recruit others to their cause. Based on five countries—France, the Netherlands, Spain, the United Kingdom, and the United States—Neumann indicates that most practice a policy of dispersal and (partial) concentration—that is, dispersing terrorists among a small number of high-security prisons.

In the US federal system, almost all terrorists are held in three high-security prisons, and, compared with the general prisoner population, are sometimes locked up in cells for longer periods of time, monitored more closely, and have their communications subjected to greater scrutiny. The French system, similarly, according to this report, imposes relatively harsh conditions for terrorist-accused prisoners, including increased isolation. In Spain, placement is determined by the type of terrorist group the inmate is affiliated with—Basque separatists connected to Euskadi Ta Askatasuna (ETA) are dispersed across the country, and Islamist extremists are concentrated in a few high-security prisons. The Spanish policy is based on the notion that, for highly structured, hierarchical groups such as ETA, avoiding concentration of prisoners in the same prison can weaken control of the organization over its members (Silke, p. 253). While the United States also houses prisoners associated with different types of terrorist objectives—including single-issue, Islamic extremists, and white supremacists—the type of confinement does not appear to be determined by terrorist ideology or group affiliation. According to Amnesty International's list of detainees at ADX, a maximum-security prison in Colorado, each of the various types of terrorists are housed in isolation in that facility (Amnesty International, 2014).

Some impacts of the different strategies, for example, the use of isolation (or solitary confinement) of prisoners, has a long history and has been studied. Smith (2006), in an extensive review of the history and use of solitary confinement (isolation) on prison inmates, concludes "whether and how isolation damages people depends on duration and circumstances and is mediated by prisoners' individual characteristics; but for many prisoners the adverse effects are substantial" (p. 1). The adverse effects include hallucinations and delusions, suicidal thoughts and depression, paranoid ideas, severe headaches, and an inability to concentrate. While not all inmates suffer these adverse results, most do. Whether there are similar effects for those confined on terroristic charges versus those confined on

other charges is unknown, although a case study of participants in the Red Army Faction suggests similar results.

Case studies on the impacts of different confinement approaches have been done on the Irish Republican Army (IRA) and on the Red Army Faction. The IRA has had a long history of conflict with Britain. A review by Ferguson, Burgess, and Hollywood (2015) shows a history of imprisonment, and changes to British policy impacting prison conditions and resulting in violent and non-violent behavior of prisoners. During an early phase of the conflict, imprisoned IRA members had rights of free association, wore their own clothes, and made their own rules. They were treated as political prisoners rather than ordinary criminals. This changed with the new rules in 1976, when they began to be treated as regular criminals, required to wear a prison uniform and engage in prison work. This led, in turn, to the prisoners going on a hunger strike, refusing to dress, and ultimately to the death of 10 hunger strikers and the murder of 21 prison officers. Following these developments, prisoners who were concentrated but not isolated actually were involved in peace negotiations, and ultimately a number of political prisoners were included in the provision for decommissioning and release 2 years after ratification of "the Belfast Agreement" (p. 272). Interviews of prisoners after release indicated that, for many, time in prison was a time to reflect, and to determine alternate ways to accomplish goals, rather than through violence; one interviewee indicated that some of the best leaders in the world developed their political thinking in prisons (e.g., Nelson Mandela). The interview (reported in Hamm, 2013, p. 7) fails to note that some also use that time to develop approaches that facilitate additional violence and terror. It is these kinds of comparative studies that are most needed.

Another group studied while imprisoned in West Germany, the Red Army Faction, was held under unusual and extreme conditions, including strict solitary confinement and spending years in prison before trial. From 1971 to 1974, Red Army Faction members were held in complete isolation. Being held in the "dead section," Red Army Faction member Meinhoff went on a hunger strike to improve her prison, and she ultimately committed suicide. While debate in the literature suggests that some of the prison conditions were exploited by the imprisoned to raise support for their cause, and that not all Red Army Faction prisoners were treated the same, nonetheless, the long-term severe isolation policy used on some of their members clearly created significant mental and physical health deterioration, and the ultimate death of at least one. This case study is consistent with the psychological studies reported earlier. (For a full review of the controversies surrounding the effects of isolation on inmates, see Smith, 2006; and for a summary of issues on isolation as a form of torture, see UN General Assembly, 2011.)

These case studies reveal, as did their earlier use in studying radicalization in prisons, that careful case studies of prisoners following their release offer valuable information on the impacts of prison on terror. In this regard, it is important to add that comparative studies of those who develop non-violent approaches to political agendas and those who develop more violent ones would be an important step forward. Many others were imprisoned along with Mandela, and it would be useful to develop a comparative case study of another prisoner of his time who did not use the time for development of an alternative political agenda.

The methodological and theoretical problems of this area of investigation are similar to those listed previously: lack of access to relevant populations, lack of comparative case studies, and lack of analysis of the impacts of context external to prisons at the time of the prisoners' incarceration. Additionally, while current research tends to focus on Islamic and/ or religious terrorism, terrorism related to separatists' struggles, single issues, and right wing extremists also need attention. Prison conditions may, in fact, differ based on the goals

and tactics of terrorism espoused by a group. Analyses of the following structural and cultural variables may shed additional light simultaneously on prisons and the true nature of terror: an examination of income inequality, the degree of racial segregation in a society, attitudes toward political policies, religious participation and practice external to prison, as well as how prison approaches to handling terrorist suspects differ internationally and in the United States. Additionally, recidivism studies, especially of released violent offenders, may profit by adding political or terrorist suspects to the list of released prisoners. While the number to be studied is likely to be small, some comparative analysis of this category of offenders with others, especially those with various types of violent offender trajectories, may be of value in understanding the impacts of prisons and terror. Further, how staff cultures impact prisoners in isolation is an area of needed research, as is the impact of these structures on the personnel themselves. And, most importantly, the development of theory providing cultural and structural explanations for types of punishment systems needs much greater development. While Garland's (2001) *Culture of Control* and its critics suggest reasons for the rise of increasingly punitive structures in the United States and Great Britain, few criminologists have examined how increases of terrorist violence impacts prison structures and theories of punishment. Prisons exist in a context; and theories of punishment as well as reform emerge from this context as well as that of the prisons. Criminologists, using both contemporary international studies and historical case studies, need to develop the theory of social control, and the role of corrections within it, as the external context and forms of terror unfold.

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The Individual Risk Assessment
of Terrorism: Recent Developments

John Monahan

In this chapter, the endeavor is to accomplish two goals. The first is to fairly synthesize the existing evidence base on the individual risk assessment of terrorism, focusing critical attention on recent—that is, since the publication of Monahan (2012)—developments in the identification of valid risk factors for terrorism. The second goal is to reflect on what must happen if research on the risk assessment of terrorism is ever to yield knowledge that is actionable in the context of national security.

Backdrop: The risk assessment of terrorism

It is necessary at the outset to be clear about how both "terrorism" and "risk assessment" are defined in this chapter, and to describe circumstances that give rise to their confluence—the "risk assessment of terrorism" (see Lloyd & Dean, 2012; Silke, 2014; Pressman & Flockton, 2014; Gudjonsson, West, & McKee, 2015).

Throughout the chapter, the definition of a *terrorist act* is taken from the Global Terrorism Database (National Consortium for the Study of Terrorism and Responses to Terrorism (2014, p. 8): "the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation."

The definition of risk assessment given by Kraemer et al. (1997) is the one often found most useful, and employed here—the process of using risk factors to estimate the likelihood (i.e., probability) of an outcome occurring in a population. Importantly, Kraemer et al. (1997) define a "risk factor" as any variable that (a) *statistically correlates* with the outcome (in this case, terrorism), and also (b) *precedes* the outcome in time. There is no implication in this definition that the risk factor in any sense bears a causal relationship to the occurrence of the outcome, or that altering the value of the risk factor will correspondingly alter the likelihood of the outcome. For several years, controversy in forensic circles has raged around the issue of whether risk assessment based on data derived from groups of people (e.g., terrorists) can be applied to the psychological or psychiatric evaluation of individual

cases (Hart, Michie, & Cooke, 2007; cf Faigman, Monahan, & Slobogin, 2014; Monahan & Skeem, 2016). Two comprehensive statistical analyses (Mossman, 2015; Imrey & Dawid, 2015) appear to have definitively resolved this controversy in favor of the applicability of group data in individual risk assessments.

There are two primary national security circumstances that call for the risk of terrorism to be assessed. The first circumstance concerns the detention of individuals prior to the adjudication of a charge of having committed a terrorist act, or the release from detention of individuals who have been adjudicated as having committed such an act. Terrorism risk assessment to inform decision-making regarding the initiation or termination of detention is often seen as reflecting the perspective of *terrorism as crime* (Kruglanski, Crenshaw, Post, & Victoroff, 2008), since it closely corresponds to the most frequent uses of violence risk assessment in the American criminal justice system—the pre-trial detention of defendants accused of crime, and the post-sentencing release on parole of prisoners convicted of crime (Monahan & Skeem, 2014a; Monahan & Walker, 2014).

The second circumstance that calls for the risk of terrorism to be assessed concerns the hiring of individuals by government agencies or the firing of individuals by such agencies. Terrorism risk assessment to inform employment decision-making is often seen as reflecting the perspective of *terrorism as workplace violence* (White & Meloy, 2010). The workplace violence perspective applies to the selection and retention of members of the military itself, as well as to the selection and retention of civilian employees with whom the military contracts. Risk assessment in this context is often referred to as the identification of "insider" threats (Bunn & Sagan, 2014; Schouten & Saathoff, 2014).

The workplace violence form of terrorism is discussed in detail in *Protecting the Force: Lessons from Fort Hood* (Department of Defense, 2010). The most pertinent of the findings from that report are that risk assessment procedures in the military "are outdated, incomplete, and fail to include key indicators of potentially violent behaviors" (p. 11), and that the Department of Defense (DoD) should "[d]evelop a risk assessment tool for commanders, supervisors, and professional support service providers to determine whether and when DoD personnel present risks for various types of violent behavior" (p. 12).

Risk Factors for Terrorism

There are, of course, many different types of terrorism. It is entirely plausible to expect risk factors for joining the Irish Republican Army to differ in ways large and small from risk factors for joining the Taliban. Here, the view of the Homeland Security Advisory Council's Report on the Future of Terrorism Task Force (2007) may be adopted, that "the most significant threat to the homeland today stems from a global movement, underpinned by a jihadist/Salafist ideology" (p. 3). That is, research on the risk assessment of terrorism should take jihadist/Salafist terrorism as its *initial research priority*, recognizing full well that there are other types of terrorism whose risk needs to be assessed, but with less urgency at this geopolitical moment. Most of the research considered in the following text, therefore, has addressed jihadist/Salafist terrorism.

A prior review by this author (Monahan, 2012) found scant empirical evidence of the validity of putative risk factors for terrorism beyond the demographically obvious (i.e., acts of terrorism are disproportionally perpetrated by young males). Indeed, the strongest empirical findings were entirely negative: terrorists tend not to be impoverished or mentally ill (but see the text that follows), substance abusers, psychopaths, or otherwise criminal;

suicidal terrorists tend not to be clinically suicidal. In no society studied to date have personality traits been found to distinguish those who engage in terrorism from those who refrain from it. The conclusion was that, given the dearth of evidence supporting the non-trivial validity of any risk factors for terrorism, the highest priority for future research in this field should be the identification of valid and robust individual risk factors. The most promising candidates identified for such risk factors included ideologies, affiliations, grievances, and moral emotions. Here, the findings on each of these four candidate risk factors are summarized and updated, and a fifth is added—identities. In addition, the proposition that risk factors for lone-actor terrorism may differ dramatically from risk factors for group-based terrorism is addressed.

Ideology

A study analyzing suicide terrorists' farewell videos and interviewing mothers of deceased suicide bombers found that the stated reasons for suicide terrorism were almost uniformly ideological (Kruglanski, Chen, Dechesne, Fishman, & Orehek, 2009). In this regard, Saucier, Akers, Shen-Miller, Knežević, and Stankov (2009, p. 256) define an ideology that they term *militant extremism* as "zealous adherence to a set of beliefs and values, with a combination of two key features: advocacy of measures beyond the norm (i.e., extremism) and intention and willingness to resort to violence (i.e., militancy)."

To develop a model of militant–extremist ideology in a "culture-fair" manner, Saucier et al. (2009) extracted statements from written material produced by extremist groups from seven regions around the world: Europe, Middle East, sub-Saharan Africa, South Asia, East Asia, Latin America, and North America. Saucier et al. identified 16 themes that recurred in multiple written statements. The authors hypothesize that the themes "could be assembled to form a coherent and potentially compelling narrative, and this narrative may be the source of much of the appeal that salient militant–extremist groups generate" (p. 269). The narrative that they propose is:

> We (i.e., our group, however defined) have a glorious past, but modernity has been disastrous, bringing on a great catastrophe in which we are tragically obstructed from reaching our rightful place, obstructed by an illegitimate civil government and/or by an enemy so evil that it does not even deserve to be called human. This intolerable situation calls for vengeance. Extreme measures are required; indeed, any means will be justified for realizing our sacred end. We must think in military terms to annihilate this evil and purify the world of it. It is a duty to kill the perpetrators of evil, and we cannot be blamed for carrying out this violence. Those who sacrifice themselves in our cause will attain glory, and supernatural powers should come to our aid in this struggle. In the end, we will bring our people to a new world that is a paradise (p. 265).

Based on this research, Saucier et al. (2009) developed a *Fanatical/Extremist Thinking Pattern Scale*, which is the most promising existing measure of terrorist ideology. Representative items include "If you are protecting what is sacred and holy, anything you do is moral and justifiable" and "Our enemies are more like animals than like humans."

Along these lines, a Pew Foundation (2013) survey on terrorism reported that, in answer to the question "Some people think that suicide bombing and other forms of violence against civilian targets are justified in order to defend Islam from its enemies. Do you personally feel that this kind of violence is justified?", 40% of the Palestinian respondents answered either "often justified" or "sometimes justified" (p. 216). It is crucial in evaluating

such dramatic findings to stress the vast gulf between terrorist ideology and terrorist action. As McCauley and Moskalenko (2011) have noted, "Polls in Muslim countries indicate that millions sympathize with jihadist goals or justify terrorist attacks. But Muslim terrorists number only in the thousands. The challenge is to explain how only one in a thousand with radical beliefs is involved in radical action" (p. 5).

Given that, by all accounts, vastly more people espouse ideological commitments conducive to terrorism than actually participate in terrorist acts, perhaps these ideological commitments manifest themselves in terrorist behavior primarily in individuals with certain pre-existing characteristics (see Borum, 2014, for a recent account of the "terrorist mindset"). While Merari (2010) correctly asserted that personality characteristics moderating receptivity to terrorism have yet to be empirically validated, one contender for such a characteristic that might differentiate—among people with militant–extremist ideological commitments—those who refrain from terrorism and those who engage in it is "boldness." Patrick and Drislane (2015), in this regard, described the validation of a boldness scale that assesses (a) "fearless tendencies in domains of emotional experience (through items tapping resiliency, self-confidence, and optimism)"; (b) "interpersonal behavior (through items indexing persuasiveness, social assurance, and dominance)"; and (c) "venturesomeness (through items tapping courage, thrill seeking, and tolerance for uncertainty)" (p. 628).

Affiliations

People who commit terrorist acts tend to associate with other people who commit terrorist acts (Smith, 2008; Weine et al., 2009). For example, Sageman (2008) reported that about 70% of the people who join al-Qaeda do so with friends, and about 20% do so with kin. Atran (2008) noted that friends tend to *become* kin as they marry one another's sisters and cousins. The Internet can greatly facilitate this terrorist bonding process (Argomaniz, 2014; Post, McGinnis, & Moody, 2014; Weimann, 2015).

Along these lines, Ginges, Hansen, and Norenzayan (2009) proposed an alternative to the hypothesis that certain religious beliefs (e.g., the belief that "martyrs" will be rewarded in an afterlife) directly influence support for suicide terrorist attacks. They refer to their alternative as the *coalitional-commitment hypothesis*: the relationship of religion to suicide attacks may be independent of any particular religious beliefs and more a function of religion's powerful ability to strengthen coalitional identities and to foster "parochial altruism." Parochial altruism is a concept developed by Choi and Bowles (2007) that combines parochialism— that is, hostility toward individuals who are not members of one's own group—with altruism—that is, benefiting in-group members at a tremendous cost to oneself.[1] Ginges et al. (2009) report several studies, finding that the frequency with which Palestinian Muslims attend mosque with their co-religionists, but *not* their frequency of prayer, positively predicted support for suicide attacks. In addition, experimentally bringing to mind synagogue attendance, but *not* experimentally bringing to mind prayer, increased the likelihood that Israeli settlers would state that a suicide attack against Palestinians was "extremely heroic." In another study, with a multireligious sample, the frequency of attendance at organized religious services, but *not* the frequency of prayer, predicted parochial altruism. Ginges et al. conclude that the relationship between religion and support for suicide attacks is independent of "devotion to particular religious belief, or indeed to religious belief in general. [Rather, the relationship] is a function of collective religious activities that facilitate popular support for suicide attacks and parochial altruism more

generally" (p. 230; see also Haidt, 2012). In other work, Ginges et al. (2009) use two self-report items to measure parochial altruism: "I blame people of other religions for much of the trouble in this world," and "I would be willing to die for my God/beliefs."

Recently, Bélanger, Caouette, Sharvit, and Dugas (2014) have developed and validated a 10-item "self-sacrifice scale" that appears conceptually similar to the "altruism" component of "parochial altruism." Items on the self-sacrifice scale include "I would be prepared to endure intense suffering if it meant defending an important cause" and "I would be ready to give my life for a cause that is extremely dear to me."

If kinship, friendship, and romantic affiliation often play a crucial role in the development of terrorist ideology and in the transformation of that ideology into terrorist actions, risk assessment must not just focus on the individual being assessed, but must also incorporate information on the behavior of those with whom the individual closely affiliates (Taylor, Roach, & Pease, 2015). In this regard, four types of affiliations may be relevant—family, romantic partners, friends, and fellow members of "virtual communities." For each type of affiliation, two issues may be salient: (a) how interpersonally close the subject feels to the person with whom the subject has the relationship, and (b) whether the person with whom the subject has the relationship condones terrorism.

Grievances

Personal and group grievances frequently are implicated in accounts of the development of terrorism (Atran, 2003). McCauley and Moskalenko (2011), for example, note that personal grievances (i.e., "[h]arm to self or loved ones") can combine with group grievances (i.e., "[t]hreat or harm to a group or cause the individual cares about") in two primary ways:

> One possibility is that each mechanism adds its independent contribution to radicalization. The second possibility is that the power of multiple mechanisms is more like a multiplication than an addition. There could be synergisms such that particular combinations of mechanisms are particularly potent. … Our cases of individual radicalization by *personal grievance* showed considerable overlap in experience with cases of individual radicalization by *group grievance*. We were led to recognize that these two kinds of grievance are often found together. Indeed, either kind of grievance is likely to produce the other. *Personal grievance* can lead an individual to seek out and cooperate with others feeling anger toward the same perpetrator: the personal then becomes political. *Group grievance* can lead to involvement in conflicts with the government and police that are experienced as unjustified repression: the political then becomes personal (pp. 214–215).

An illustration of an item to assess personal grievances is "I feel that, because of my religion, I have personally been subjected to great injustices in my life." An illustration of an item to assess group grievances is "Israel should withdraw all its troops and settlements from the territories it occupies on the West Bank."

Others have argued that one particular grievance—the loss of a loved one—may indirectly remind a person of his or her own mortality in a particularly personal way, and that being reminded of one's own death has important behavioral consequences. Terror management theory, for example, holds that people respond to what that theory refers to as the "existential" fear of death by clinging to their existing worldviews more tenaciously, since those worldviews may provide a measure of protection against otherwise debilitating anxiety. As stated by Pyszczynski, Rothschild, and Abdollahi (2008, p. 319), "in the face of

elevated concerns about death, people are more prone to dehumanizing, vilifying, and supporting the killing of worldview-threatening others." A meta-analysis concluded that the central hypothesis of the theory—that death affects us without our conscious realization—"is robust and produces moderate to large effects across a wide variety of mortality salience manipulations as well as attitudinal, behavioral, and cognitive dependent variables" (Burke, Martens, & Faucher, 2010, p. 187).

Several studies have directly applied terror management theory to the study of terrorism (for a review, see Vail, Motyl, Abdollahi, & Pyszczynski, 2010). Pyszczynski, Abdollahi, Solomon, Greenberg, Cohen, and Weise (2006), for example, in a randomized experimental study of Iranian college students, found that students reminded of death were more supportive of "martyrdom" attacks against the United States than students not reminded of death. In addition, Kokdemir and Yeniceri (2010) found that predominantly Muslim university students in Turkey, when reminded of death, wanted their country to have stronger relations with Turkmenistan (also predominantly Muslim) and weaker relations with England and Greece. Finally, Orehek, Sasota, Kruglanski, Dechesne, and Ridgeway (2014) recently have found that:

> A person who views the self as interdependent with others in the social group should experience less death anxiety than should a person who views the self independently because identification with a group fortifies one's sense of self, hence boosting one's perceived significance. While a person's life may be temporary, a group can live on indefinitely (p. 265).

In accord with this view, Orehek et al. (2014) found that—compared with subjects with independent self-construals—subjects with interdependent self-construals experienced less anxiety about their own deaths and greater willingness to sacrifice themselves for other members of groups with whom they shared a worldview.

Grievances, particularly in the form of the loss of loved ones due to military actions by those perceived to be enemies, may be an undervalued individual risk factor for terrorism. Grievances may be particularly potent risk factors for terrorism in "cultures of honor" (Nibbett & Cohen, 1996) in which "men are sensitive to a cultural script in which aggression is used to restore threatened manhood" (Bosson & Vandello, 2011, p. 83).

The three risk factors for terrorism just discussed—ideology, affiliations, and grievances—have been combined by Kruglanski, Chen, Dechesne, Fishman, and Orehek (2009) into an overarching notion of a "significance quest" that is undertaken by suicidal terrorists. For a recent elaboration of the concept of "significance quest" and its implications for terrorist recruitment in prisons, see Dugas and Kruglanski (2014).

Moral Emotions

Numerous scholars have recently argued that terrorism can only be understood in terms of morality—that is, in terms of other groups violating one's own group's "sacred values" (Ginges, Atran, Sachdeva, & Medin, 2011). Tetlock (2002) defines a *sacred value* as "any value toward which a moral community proclaims, at least in rhetoric, an unbounded or infinite commitment." For example, Ginges, Atran, Medin, and Shikaki (2007) report several experiments carried out with Palestinian and Israeli participants, showing that violent opposition to compromise over values considered by one group or the other to be sacred—for example, exchanging land for peace, sovereignty over Jerusalem, and the right

of Palestinian refugees to return to their former lands inside Israel—is *increased* by offering material incentives (i.e., the payment of money) to compromise with one's adversary, but is *decreased* when the adversary makes symbolic compromises over their own sacred values (e.g., recognizing the right of the other to exist as a state). In other words, the use of material incentives to promote the resolution of conflict *backfires* when adversaries see these incentives as a challenge to the "sacredness" of their moral values.[2] Ginges and Atran (2009) have replicated this result with Indonesian madrassa students, with the "backfire effect" being the strongest among the most radicalized students. As summarized by Sheikh, Ginges, and Atran (2013; see also Ginges & Atran, 2013):

> Findings indicate that sacred values are immune to material trade-offs and insensitive to quantity (e.g., God loves equally a martyr who kills 100, 1,000, or none of the enemy because it is the commitment to the cause that counts). Sacred values also have privileged links to emotions, such as anger and disgust at their violation, leading to moral outrage and increased support for violence (p. 21).

In this regard, Haidt (2012; see also Hutcherson & Gross, 2011) has described a "new synthesis" in the study of morality that may have important implications for studying the violent actions in which terrorists feel morally obligated to engage. A key aspect of this new synthesis is the primacy of *moral emotions* over *moral reasoning*. "Moral reasoning, when it occurs, is usually a post-hoc process in which we search for evidence to support our initial intuitive reaction" (Haidt, 2007, p. 998). Haidt posited that the principal moral emotions used to condemn others are anger (e.g., Novaco, 2013), contempt (e.g., Matsumoto, Hwang, & Frank, 2014), and disgust (Olatunji, Ebesutani, Haidt, & Sawchuk, 2014). "Moral foundations theory" (Graham et al., 2013) has been used in many studies to understand the basic structure of values that an individual considers to be "moral" rather than merely utilitarian. Items on the instrument derived from this theory include subjects' degree of agreement/disagreement with statements such as "People should be loyal to their family members, even when they have done something wrong" (see also Graham, 2014).

Identities

"Identities" is a promising risk factor for terrorism not noted in a prior review (Monahan, 2012). A series of studies by Swann, Jetten, Gomez, Whitehouse, and Bastian (2012) has been the first to elaborate the concept of "fused identity" and its possible relation to terrorism:

> Past theorizing on the causes of extreme group behaviors such as terrorism has focused on the influence of dispositional variables such as psychopathology. … All of these frameworks implicitly or explicitly assume that there exists a fundamental tension between the individual versus the collective or social self. This presumption that the personal and social self are perpetually in competition is unfortunate and misleading, as a full understanding of extreme behavior requires coming to grips with the contribution of both personal and social influences. … Fusion theory is designed to fill this gap in the extant literature (p. 451).

In the view of Swann et al. (2012), identity fusion occurs when people experience a visceral feeling of oneness with a group. "The union with the group is so strong among highly fused persons that the boundaries that ordinarily demarcate the personal and social self become

highly permeable." Swann, Buhrmester, Jetten, Bastian, Vázquez, et al. (2014) (see also Swann et al., 2014; Swann & Buhrmester, 2015) have identified "a psychological pathway through which large aggregates of strangers are transformed into 'family members' for whom some individuals will make extreme sacrifices."

> [F]or fused persons, the perception of shared core characteristics fosters perceptions of familial ties to other group members, which, in turn, embolden endorsement of self-sacrifice. From this perspective, what appears to be "selfless" behavior on the part of fused persons is not selfless at all. Rather, when fused persons endorse sacrifice for other group members, they do so out of a sense of personal obligation to individuals whom they construe to be living extensions of themselves, their family (p. 925).

There have been great methodological advances in the study of identity fusion in recent years. As reviewed in Swann et al. (2012), there now exist both a single-item pictorial measure of identity fusion, as well as a seven-item verbal measure of this concept (e.g., "I am one with my group of violent jihadists" and "My group of violent jihadists is me"). Very recently, Jimenez et al. (2016) have combined aspects of both the pictorial and verbal approaches into a promising web-based measure that they have termed the Dynamic Identity Fusion Index (DIFI). In addition, the concept of fused identity has recently been used to study terrorist victimization, rather than perpetration (Buhrmester, Fraser, Lanman, Whitehouse, & Swann, 2015).

This chapter argues that five categories of variables have promise as risk factors for terrorism: ideologies, affiliations, grievance, moral emotions, and identities. It is entirely possible that some pathways to some types of terrorism operate through one set of risk factors and other pathways to other types of terrorism operate through another set of risk factors. In this regard, it is important to stress that risk factors for lone-actor terrorism may differ significantly from risk factors for group-based terrorism, a topic to which we now turn.

Risk Factors for Lone-actor Terrorism: Different from Risk Factors for Group-based Terrorism?

As Moskalenko and McCauley (2011, p. 124) have noted, "Ideology and ideas of justice may … be more important for solo political action than for action embedded in radical groups or terrorist organizations." Crenshaw (1981), relying on studies of the members of terrorist organizations, concluded that "the outstanding common characteristic of terrorists is their normality." The question raised by Spaaij (2010, p. 862) is "whether this observation applies not only to members of terrorist organizations, but also to lone[-actor] terrorists." Spaaij suggests that Crenshaw's observation in fact may not apply to lone-actor terrorists. To the extent that certain variables function as valid risk factors for lone-actor terrorism but do not function as valid risk factors for group-based terrorism—or vice versa—then to lump lone-actor terrorists with group-based terrorists in a single analysis would serve to mask what might otherwise be important findings.

The clearest development in research on the risk assessment of terrorism over the past 5 years has been the increased attention paid to lone-actor terrorism (Gruenewald, Chermak, & Freilich, 2013; LaFree, 2013; McCauley & Moskalenko, 2014). For example, in a recent and remarkable study, Gill, Horgan, and Deckert (2014) analyzed open-source data on 119 individuals who engaged in or planned to engage in lone-actor terrorism within the

United States and Europe, and either were convicted for their offenses or died in the process of offending. Other than the fact that the sample was heavily (99.6%) male, no other variable characterized a majority of lone-actor terrorists. There were, however, significant differences among subgroups of lone-actor terrorists.

> [C]ompared to right-wing [e.g., anti-government, racist] offenders and single-issue [e.g., antiabortion, animal rights] offenders, those inspired by al-Qaeda were younger and more likely to be students and to have sought legitimization from epistemic authority figures. They were also more likely to learn through virtual sources and display some form of command and control links. Right-wing offenders were more likely to be unemployed and less likely to have any university experience, make verbal statements to friends and family about their intent or beliefs, and engage in dry runs or obtain help in procuring weaponry. Single-issue offenders were more likely to be in a relationship, have criminal convictions, have a history of mental illness, provide specific pre-event warnings, and engage in dry runs (pp. 434–435).

Using the same dataset of lone-actor terrorists compiled by Gill et al. (2014) and augmenting it with other datasets, Corner and Gill (2015) concluded that the odds of a lone-actor terrorist having a mental illness is 13.49 times higher than the odds of a group-based actor having a mental illness. In addition, lone actors who were mentally ill were 18.07 times more likely than those without a history of mental illness to have a spouse or partner who was also involved in a terrorist movement.

From "Promising" Risk Factors to "Validated" Risk Factors

It is difficult to avoid the conclusion that in no real-world national security context can an instrument to assess the risk of terrorism be prospectively validated in the same manner that risk assessment instruments for common violence (e.g., robbery, assault) are prospectively validated (Monahan & Skeem, 2014b). That is, in no real-world national security context can an instrument to assess the individual risk of terrorism be prospectively validated by:

- Administering the risk assessment instrument to large groups of people in either a *terrorism as crime* or a *terrorism as workplace violence* context
- Releasing a large portion of these individuals from detention—including those who score as "high" for risk of terrorism on the instrument—or employing them as members of the US military or as civilian contractors to the military
- Monitoring their behavior to determine which ones commit terrorist acts and which ones do not, in order to determine whether the instrument is able to statistically distinguish the former from the latter

If prospective validation is not remotely feasible, "known group" validation methods (Cronbach & Meehl, 1955; DeVellis, 2011) may be the most that can realistically be achieved when validating risk factors for terrorism. As Freilich, Chermak, and Gruenewald (2015) have recently stated, "comparing terrorist perpetrators to a non-terrorist comparison group" is the underused method of choice for studying many questions regarding terrorism. In a known-groups (or "case-control") design, the researcher (a) measures the presence of a potential risk factor among a group of people known to be terrorists, and (b) measures the presence of the same potential risk factor among a demographically matched group of people who are known not to be terrorists, and (c) compares the prevalence of the potential

risk factor in the two groups. To the extent that the prevalence of the potential risk factor is higher among the group of people known to be terrorists than among the group of people known not to be terrorists, the potential risk factor fulfills at least one of the two criteria for being a valid risk factor set forth by Kraemer et al. (1997): it correlates with the outcome (in this case, terrorism). Whether the putative risk factor fulfills the other Kraemer et al. criterion for being a valid risk factor—did it precede the outcome in time?—would still need to be established. For example, if a certain ideological commitment, or a given moral emotion, became manifest in terrorists only *after* they had already become terrorists, that commitment or emotion would not be a risk factor for initiation into terrorism.

Of course, this proposal raises the immediate issue of how one might obtain a group of people "known to be terrorists." Only two groups of known *jihadi* terrorists currently are under American control: (a) detainees under DoD control at the US Naval Base in Guantanamo Bay, Cuba, and (b) prisoners convicted of terrorism-related crimes and residing in the federal Bureau of Prisons (BOP). However, one of these two groups of known terrorists—those at Guantanamo—has become unavailable as research subjects. In 2011, the DoD issued Instruction 3216.02, titled "Protection of Human Subjects and Adherence to Ethical Standards," which states that "Research involving a detainee … as a human subject is prohibited."

Given that the DoD has ruled out using terrorists detained at Guantanamo as research subjects, if empirical studies to improve the risk assessment of terrorism are to take place in the United States, the known group of terrorists must be drawn from terrorist–prisoners who reside in the BOP.[3] Given this fact, US-based *jihadi* terrorists were located using open-source lists, and the names of these terrorists were cross-checked with the web-based BOP "inmate locator." It was found that 90 *jihadi* terrorists—87 men and three women—currently reside in the BOP. It was independently verified that these BOP inmates are accurately classified as *jihadi*-type terrorists by locating and coding court records—primarily indictments, but also criminal complaints and judicial opinions—for all 90 identified inmates. For at least 5 years, however, repeated attempts by this author and other researchers (e.g., LaFree, quoted in Shane, 2011) to interview terrorist prisoners have been rebuffed by the BOP on the grounds that obtaining the interview data required for analysis "would pose security and workload concerns."

Conclusion

Marc Sageman (2014), one of the best-known scholars of terrorism, recently wrote a thoughtful piece, titled *The Stagnation in Terrorism Research*:

> [W]e have a system of terrorism research in which intelligence analysts know everything but understand nothing, while academics understand everything but know nothing. This critique is but the last of a long jeremiad going back almost forty years about the poor quality of the research in the field. At this point, the government funding strategy and its refusal to share accumulated data with academia has created the architecture of the IC [Intelligence Community]–academic divide preventing us from developing useful and perhaps counter-intuitive insights into the factors leading people to turn to political violence. The solution is obvious: we need more productive interactions between the two communities. But this would require political courage and will (p. 576).

Some recent and respected reviewers of the state-of-the-science of terrorism research find "reason to be optimistic about the future of terrorism studies" (Freilich et al., 2015).

Clearly, there has been significant progress in recent years in the study of some aspects of terrorism—for example, on lone-actor terrorism. But there is reason to believe that Sageman is correct: "stagnation" is precisely the right term to describe the state of terrorism risk assessment research at this point in time. Heroic and enormously time-consuming efforts are being made to create datasets from scratch using open-access sources (e.g., Gill et al., 2014). But there are limits as to what can be learned from relying solely on secondary-source information. Without question, granting academic researchers access to actual terrorists for interviewing—which, for reasons given in the preceding text, can only mean terrorists residing in the BOP—would raise a host of genuinely difficult "security and workload concerns." But, at least regarding risk assessment, studying terrorism without studying terrorists is ultimately a futile enterprise.

Notes

1   On the concept of altruism, McCauley and Moskalenko (2011) note that "studies of altruism have shown the importance of sympathy and empathy in predicting help for a stranger in distress. Although altruism research has not yet examined the relation between empathy and aggression toward the perpetrator of a stranger's distress, the importance of individual differences in empathy for understanding political radicalization may be worth pursuing" (p. 33). However, a recent meta-analysis of 106 effect sizes by Vachon, Lynam, and Johnson (2014) concluded that "Collectively, across all measures of empathy and aggression, only 1% of the variance in aggression was explained by empathy" (p. 764).
2   In a related article, Rai and Fiske (2011) have stated, "When someone offers you a million dollars for your daughter, you do not counter with three million—you regard the offer as heinously offensive" (p. 66).
3   It might be objected that Instruction 3216.02 should also preclude using federal prisoners under the control of the BOP for the commission of terrorism-related crimes as subjects in research. However, another DoD Instruction—this one numbered 2310.01E2—referencing the Geneva Conventions of 1949, states that the term "detainee" "does not include persons being held primarily for law enforcement purposes." Terrorists residing in the BOP, therefore, are not "detainees" in the view of the DoD: they are federal prisoners who have been charged with or convicted of terrorism-related crimes, "being held primarily for law enforcement purposes." As such, they are subject not to the DoD Instruction quoted earlier, but to BOP Research Policy Statement 1070.07 and to 28 CFR 46, which permit BOP prisoners to voluntarily serve as subjects in certain approved research studies.

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Legislative Efforts to Prevent Eco-terrorist Attacks

Yi-Yuan Su and Sue-Ming Yang

Introduction

Eco-terrorism has recently become a concern for many industrialized countries. There is little doubt that economic development could harm the environment and endangered the public's health. The awareness of environmental preservation and protection has been sharpened by several large-scale natural disasters, such as Hurricane Katrina in the United States and the tsunamis that hit South East Asia in 2004 and Japan in 2011. For example, the tsunami and the nuclear accident in Japan caused panic in the general public and mobilized environmental groups. Tragic events such as this raise public awareness about environmental protection issues (Spencer, Seydlitz, Laska, & Triche, 1992; Leiserowitz, Maibach, Roser-Renouf, Feinberg, & Howe, 2013). These issues have radicalized environmental groups to use violence against the government, businesses, factories, and individual properties.

The economic damage resulting from eco-terrorism attacks is not trivial. In 2001, the FBI argued that the Earth Liberation Front (ELF) was the number one domestic terrorism threat, and that it had caused an estimated US$100 million in damage. To respond to the threats, the United States passed several bills to prevent terrorism actions, including the Anti-Terrorism and Biological Weapons Acts of 1989, the Anti-Terrorism and Effective Death Penalty Act of 1996, and the USA PATRIOT Act of 2001.

Additionally, many countries established legal mechanisms to counter terrorism after the 9/11 terrorist attacks. This chapter will briefly review legislative efforts against eco-terrorism around the world and then focus on the counter-ecoterrorism statutes in the United States.

Background and the Development of Eco-Terrorism

The Norwegian philosopher Arne Naess proposed the deep ecology theory in 1973, and has been advocating for the international deep ecology movement since then. Naess divided an ecological orientation into a human-oriented perspective and an environmental-guided approach. The latter forms the basis of deep ecology. The central idea of deep ecology is that

every creature has intrinsic value (Goodwin, 2007) and deserves equal respect and privilege. Every living thing is equally important, whether it is a person, an animal, or a plant. Thus, deep ecology philosophy, to some extent, challenges the idea that humans are superior to all other living things (DesJardins, 2013). Deep ecology has influenced many animal rights and environmental activists, and inspired the environmental movement (Eagan, 1996; Liddick, 2006; Carson, 2013). Despite common philosophical roots and goals of environmental protection, various groups follow different approaches. While mainstream environmental groups adopt non-violent ways to achieve their goals, others use more radical tactics, which are referred to as "direct action."

Direct Action and Green Anarchism

The direct action activists use radical methods—including strikes, sit-ins, protests, demonstrations, and vandalism—that often cause economic damage (Loadenthal, 2013). Direct action tactics also include non-violent and less violent activities, such as those that target property, though whether the destruction of property is non-violent action is debatable.[1]

Eagan (1996) argued that Greenpeace was the first environmental organization to use direct action to protest American nuclear testing in 1971. To achieve their goal, a small team of activists sailed from Vancouver to Alaska to sabotage a nuclear test site. Other groups such as the Earth Liberation Front (ELF) and the Animal Liberation Front (ALF) also follow the direct action approach. These groups believe that their actions are only violent if used against human beings or other animals. The destruction of property is thus justifiable, and is not considered violence (Goodwin, 2007; Loadenthal, 2013).

The movement is commonly referred to as "Green Anarchism" and combines elements of anarchism with environmentalism. The green anarchists fight against modernization and capitalism and are committed to protect the environment through direct action. Many ALF and ELF members are green anarchists who target those perceived to be harming the environment. Green anarchists have attacked food processing plants, leather companies, logging factories, and research facilities.

Environmental and Animal Rights Movement

Due to differing ideologies, there is a division between groups that focus on animal rights and environmental protection. The greatest distinction between the two is that animal rights activists do not focus on inanimate objects such as stones and trees, while environmental groups are concerned about the ecological system as a whole. In the following text, we provide a quick review of some major groups that play an active role in these movements.

A. The Animal Liberation Front (ALF)

The origins of animal rights can be traced back to nineteenth-century Britain. In 1824, the first animal protection group, the Society for the Protection of Animals (SPCA), was established. However, it was not until the mid-1970s that people began to focus on animal rights within the context of medical experiments, when Peter Singer and Tom Regan, two famous advocates of animal rights movements, started educating the public. Singer's book,

Animal Liberation, is considered the guidebook of the animal liberation movement. The Animal Liberation Front (ALF) was established in Great Britain in 1976. ALF follows a flat organizational structure model and has no membership lists or official leaders. As such, ALF considers anyone who carries out actions following its guidelines to be an ALF activist. Despite the numerous attacks on fur companies, animal laboratories, and farms since 1976, ALF claims that no human or animal has been hurt by their activities, and therefore contests the eco-terrorism classification. However, the direction of the ALF continues to evolve, and some of its members have targeted biomedical researchers using tactics such as bombings and arsons. For example, in 1987, ALF committed an act of arson at a veterinary laboratory in University of California–Davis, causing damages worth US$3.5 million; in 1992, they firebombed an animal research laboratory at Michigan State University.

B. The Earthfirst! and Environment Liberation Front (ELF)

The Earthfirst! was the first organization that adopted direct action activities in the name of environmental protection. ELF endorses direct action (e.g., spiking, tree sitting) to increase the expenses of the targeted entities as much as possible. The greater the losses, the more media attention is usually paid to radical environmentalism (Mancuso-Smith, 2006). The ELF is a splinter group of Earthfirst!. It was founded in 1992 in the United Kingdom (Mobley, 2002); spread to continental Europe, New Zealand, and Australia in 1993; and reached the United States in 1997 (Joosse, 2007, 2012). Much like Earthfirst!, the ELF engages in illegal actions such as destruction of property (Carson, LaFree, & Dugan, 2012). The ELF has committed acts of environmental destruction through various tactics, but arson is the most common method. For example, to protect a lynx habitat, the ELF burned down a ski resort in Vail, resulting in US$12 million worth of damages. The Global Terrorism Database (GTD) and the Eco-Incidents Database (EID) include 230 attacks committed by the ELF or their associates between 1970 and 2011, and 51 are arson related. Despite the different ideologies of the animal rights and environmental protection groups, the members of Earthfirst!, the ELF, and the ALF soon allied to achieve their common goals of environmental and animal preservation. Out of the record of 1,108 attacks committed by or related to active/radical environmental and radical animal rights groups/individuals in the continental United States, 336 were initiated by the ALF, and 225 attacks were committed by the ELF, resulting in two injuries.

C. The Sea Shepherd Conservation Society (Sea Shepherd)

Paul Watson established the Sea Shepherd Conservation Society in 1978 after he ended his relationship with Greenpeace in 1977 (Correll, 1993). Different from the peaceful and non-violent approach now endorsed by Greenpeace, Watson decided to continue taking direct actions against illegal whaling and fishing activities in international waters (Roeschke, 2009; Correll, 1993). His followers sunk several whaling vessels, starting from 1978, in many countries including Iceland, Portugal, and Spain. They also interfered with Japanese whaling vessels in the South Pacific and Antarctic Ocean. Consequently, the Japanese government threatened to sue Sea Shepherd for piracy and eco-terrorism. Since most of these harassing tactics occurred on the high seas, it was difficult for Japan to obtain jurisdiction and rely upon international law to stop Sea Shepherd. Since 1976, Sea Shepherd

also started engaging a direct action campaign against seal hunting in Canada. As a result, the Canadian government charged members of Sea Shepherd with conspiracy, mischief, extortion, and other criminal charges (Correll, 1993).

D. Stop Huntingdon Animal Cruelty (SHAC)

Stop Huntingdon Animal Cruelty (SHAC) was a non-profit organization whose primary goal was to stop live animal experiments and testing activities at Huntingdon Life Sciences, a private company registered in the State of New Jersey. SHAC was founded in 1999 by three British animal rights activists. Since then, SHAC members and supporters have engaged in protests, intimidation, and the harassment of law enforcement officers, employees of Huntingdon Life Science (HLS), and their families.[2] They blamed HLS for using monkeys and other live animals in their testing laboratories during pharmaceutical, biological, and chemical experiments. While SHAC legally engaged in campaigning or lobbying for animal protection, they also committed crimes such as breaking into animal testing laboratories and releasing the test animals (Mancuso-Smith, 2006). The FBI included SHAC as a domestic eco-terrorist group in 2005, and has prosecuted its members by applying the Animal Enterprise Protection Act of 2002 to their cyberstalkings of HLS employees.[3] SHAC announced the end of its campaign and other activities in August 2014.[4]

Research on Eco-terrorism

As mentioned, more extreme environmental protection methods, ranging from tree-spiking to bombing, increased in popularity in the 1990s (Eagan, 1996). Because these newer forms of direct action are potentially lethal, they are often referred to as "eco-terrorism" (Eagan, 1996).

Although the FBI cited eco-terrorism as the most serious domestic threat facing the United States in 2005 (Carson et al., 2012), the definition of eco-terrorism has been controversial (Eagan, 1996). Some scholars believe that the term "eco-terrorism" stigmatizes environmental or animal rights activists who use extreme measures to achieve their goals (Eagan, 1996; Liddick, 2006; Smith, 2008). Instead of targeting human lives, these groups often fight against businesses such as logging companies, factories, research facilities, and fur companies, with the goal of raising people's awareness of environmental issues. Thus, labeling these actions as "terrorism" is still debatable.

Eco-terrorist attacks are carried out not only by radical environmental groups but also by radical animal rights groups. For example, in the early 1980s, many enterprises that used or marketed animal-derived products as part of their commercial or professional operations were targeted by radical animal rights groups or individuals. According to a 1993 report by the Fur Commission, 28 different types of enterprises involving animals—including university laboratories, fur retailers, food-production facilities, and medical centers—were targeted by animal rights extremists during the period 1977–1993.

The leaders of industries that use animals joined several congressional hearings starting in 1998[5] (Mobley, 2002) and eventually persuaded the US Congress to broaden the scope of the Animal Enterprise Terrorism Act (AETA) in 2006.[6] The animal enterprises that "sell(s) animal or animal products for profit" were added into Article 43 (d).[7] Previously, the FBI proposed a definition of eco-terrorism as "the use or threatened use of violence of a criminal

nature against innocent victims or property by an environmentally oriented sub-national group for an environmental–political reason" (Buell, 2009). Following the modification of the AETA of 2006, the FBI now includes the extreme fringes of animal rights, pro-life, environmental, anti-nuclear, and other movements under the category of this special form of terrorism (FBI, 2002).

Most terrorism research focuses on international extremist movements rather than domestic activities. This research gap is pronounced for eco-terrorism as it is debatable whether radical environmentalists should be considered as terrorists (Eagan, 1996). Indeed, eco-terrorist attacks often result in a great amount of property damage, but they rarely cause casualties (Chermak, Freilich, Duran, & Parkin, 2013). More recently, in many industrialized countries, environmental issues and eco-terrorist attacks have received more attention. Even countries without active environmental groups have started to pay attention to these issues. The Canadian government also considers eco-terrorism to be one of their leading domestic threats. Its report, *Public Safety Canada* (2012), argues that radical environmentalists could pose a major threat to Canadians.

Carson's (2013) comprehensive analysis concluded that the rational choice perspective can explain environmental and animal rights extremists. As with regular criminals, radical environmentalists also estimate costs and benefits, and they generally attack when the perceived benefits outweigh the risks. Analyzing 240 eco-terrorist attacks, Chermak et al. (2013) pointed out that almost all environmental and animal rights extremists pled guilty to their crimes. Therefore, it is important to evaluate legislative efforts to see if they are effective in preventing future eco-terrorist attacks.

Disentangling the Criminal Intention of Eco-Terrorism

To better understand how to prevent eco-terrorism, it is important to first distinguish between "environmental terrorism" and "eco-terrorism." Although they are sometimes used interchangeably, and both involve acts that may be violent and generate fear, they are qualitatively distinct concepts. The major differences between eco-terrorism and environmental terrorism are in their targets and motivations of attacks.

Environmental terrorism refers to activities that focus on the environment as the target of attack to achieve other purposes (Schofield, 1999). Thus, the environment itself is targeted or used by the terrorists to cause destruction (e.g., pollute water to coerce governmental compliance). Eco-terrorism refers to violence that is used to prevent the environment's destruction. It concerns the development of anthropogenic construction or activities that might cause adverse impacts on nature or on the protection of animals. Violent actions are taken against the entities that endanger the natural environment or animal protection (Lovitz, 2007). Thus, the environment in this situation is neither targeted nor the medium of attack. Rather, protecting the environment is the ultimate goal in this type of attack (Karasick, 2009).

Other than the differential role of the environment, the intentions of causing property damage are similar to both movements, and thus both are considered criminal. The radical environmental actors engage in violent attacks, targeting companies or institutions with the intention of causing property damages and economic loss. As such, these radical behaviors constitute the crime. As per the AETA of 2006, Article 43, (a) (2),[8] two conditions must be satisfied before the activities of the radical environmental group or individual can be labeled as "terrorist." First, the individuals must intentionally conduct radical actions to attract

public attention toward environmental issues. Second, their radical actions prevent the targeted companies or institutions from continuing their business due to fear of personal safety or greater economic damages (Mancuso-Smith, 2006; Karasick, 2009).

Countermeasures against Eco-terrorism in the World

Most legislative efforts and policies focus on more typical forms of terrorism and ignore eco-terrorism. Thus far, international organizations have not proposed regulations related to trans-boundary eco-terrorism, and no single treaty or convention is designed for eco-terrorism prevention. As for terrorism generally, the European Union (EU) adopted the "Council Framework Decision on Combating Terrorism" in 2002;[9] however, eco-terrorism was not included in the framework (Govern, 2009). The EU member states also do not have specific regulations on countering domestic eco-terrorism. Searching through regulations of industrialized countries, including Canada, Japan, and Australia, we found that none had specific legislation dealing with domestic eco-terrorism. Rather, they prosecute and punish eco-terrorism cases with traditional criminal codes. Only the United States has established specific federal laws, and about 30 states also have established laws targeting eco-terrorism (Lovitz, 2007).

Based on the Eco-Incidents Database (EID) that was compiled by Carson et al. (2012), there have been 1,213 eco-terrorism incidents around the globe since the 1970s. Of these, 1,107 (91.3 %) incidents occurred on US soil, while 65 incidents were committed in Europe. Due to the disproportionate number of eco-terrorism cases in the United States, we devote the majority of the following discussion on the legislation and litigation related to eco-terrorism cases in the United States.

Countermeasures against Eco-terrorism in the United States

Beginning in the late 1990s, the US government started a counter-terrorism campaign especially targeting radical environmental and animal rights activists.[10] In addition to legislative changes, there have been law enforcement efforts to respond to eco-terrorist threats. For example, the FBI launched Operation Backfire in response to a series of attacks committed by The Family, a splinter group of both ALF and ELF supporters. According to the US attorney's office in Portland, Oregon, The Family was responsible for 20 acts of arson that resulted in US$48 million in property damage, including the torching of two elk lodges and several other buildings and ski lifts. Between 1996 and 2001, the group also attacked research facilities, lumber mills, and US Forest Service ranger stations in Oregon, as well as horse slaughterhouses in Oregon and Northern California. In 2007, The Family destroyed an energy facility and committed arson 23 times. Starting in 1998, the FBI launched a 10-year operation with at least nine distinct actions to combat activities of The Family. During the 10 years, 234 attacks were initiated by the ALF, 214 attacks by the ELF, and 22 attacks by The Family, according to the GTD and EID.

From 2004, Operation Backfire successfully captured many leading eco-terrorists. In 2004, the first arrest was made in Los Angeles, California, by the FBI, and William Cottrell was indicted for his role in a series of arsons. Between 2005 and 2006, the FBI charged six women and seven men with 20 acts of arson across five US states. Rebecca Jeanette Rubin, a Canadian citizen, was charged with multiple crimes, including federal arson and building

destructive devices in Oregon, Colorado, and California. The leader of The Family, William C. Rodgers, committed suicide in a jail in Arizona after being indicted in 2006. Operation Backfire investigators have solved more than 40 crimes ranging from vandalism to arson. These successes highlight the operation's effectiveness.

The operation involved many agencies. Operation Backfire was led by the assistant US attorneys in Eugene, Oregon, and included the FBI's Joint Terrorism Task Force in Oregon, the US Forest Service, the Bureau of Land Management, the Oregon State Police, and the Eugene Police Department (Deshpande & Howard, 2012). According to Deshpande and Howard, the success of the operation was due to its effective organizational framework and cooperation between many different organizations, both in terms of information sharing and the investigation itself.

Besides the law enforcement operations, there are several important laws designed to counter eco-terrorism. In the next section, we conduct an analysis of these laws in order to compare purposes and elements of each law and to reveal common legal practices in eco-terrorism cases.

Eco-terrorism-related Legislation

A. Racketeer Influenced and Corrupt Organizations Act of 1970 (RICO)

RICO is a criminal statute with civil liability granted under the Organized Crime Control Act of 1970 designed to fight against organized crime (Mancuso-Smith, 2006). It authorizes the attorney general to seek civil remedies on the involved organizations with a maximum of triple damages for a criminal conviction. In Sec. 1964 (C) of the RICO, the coverage of the civil remedies could be "any person injured in his business or property" if such organized crime was done by the "enterprise" and using a "pattern of racketeering activity."[11] The definition of "racketeering activity" under the RICO Sec. 1961[12] covers almost all types of criminal activities, especially activities endangering interstate commerce. The term "enterprise"[13] also broadened the types of actors included in this legal domain. In some cases, the application of RICO rules against those accused of eco-terrorism might violate the First Amendment, providing the right of expression under the US Constitution (Mancuso-Smith, 2006).

B. The Anti-Drug Abuse Act of 1988 (ADA of 1988)

Enacted on November 18, 1988, the ADA of 1988 established the Office of National Drug Control Policy (UNDCP) and targeted sellers and buyers in the drug trade. Though the original purpose of the ADA of 1988 had nothing to do with eco-terrorism, the Sec. 1864 ("Hazardous or injurious devices on Federal lands") was added and excluded the usage of hazardous or injurious devices on federal lands due to several high-profile tree-spiking incidents. In May 1987, a sawmill worker George Alexander was almost beheaded when a tree-spike shattered his saw blade at the Cloverdale Louisiana-Pacific mill in Northern California. The tree spikes were commonly used by eco-terrorist groups to obstruct or hinder timber logging on federal lands because the hidden tree spikes would cause severe bodily injury on loggers or damages on machines (Carson, 2013; Forest, 2013). John P. Blount was the first one charged with violating 18 USC Sec. 1864, because he put 384 metal nails on 284 trees in the Clearwater National Forest, Idaho, on March 29, 1989.

C. The Animal Enterprise Protection Act of 1992 (AEPA of 1992)

Due to large monetary damages caused by extreme environmental groups, the federal government passed the Animal Enterprise Protection Act of 1992 (AEPA of 1992) to prevent eco-terrorism. By the early 1980s, radical animal rights groups or individuals had targeted many enterprises that used or marketed animal-derived products in their commercial or professional operations. According to a report in 1993 by the Fur Commission,[14] a total of 28 different types of animal enterprises were victimized by animal rights extremists—including university facilities, fur retailers, food production facilities, and medical centers—during the period 1977–1993.

The AEPA of 1992 was enacted into law on August 26, 1992, and codified as 18 USC Sec. 43. The US Congress passed the AEPA of 1992 in response to those who use violence and other disruptive expressions of extremism under the claims of animal rights protection. If the physical disruption caused by their action results in economic damage exceeding US$10,000, extreme animal rights activists who are convicted may face fines or imprisonment for up to 1 year.

D. The Animal Enterprise Terrorism Act of 2006 (AETA of 2006)

The Animal Enterprise Terrorism Act of 2006 (AETA of 2006) is a United States federal law that provides the Department of Justice the authority to apprehend, prosecute, and convict individuals committing animal enterprise terror. This act was passed on November 27, 2006. The statute covers economic damage to animal enterprises and threats of death and serious bodily harm to persons associated with animal enterprises.

The AETA of 2006 was designed to replace its predecessor, the AEPA of 1992, with the new law covering actions such as harassment and threats. Furthermore, the AETA of 2006 expanded the protected objects to include animal-enterprise-associated persons and companies. However, lawful expressions of freedom of speech are not prohibited.

E. USA PATRIOT Act of 2001

The USA PATRIOT Act was passed by the US Congress on October 26, 2001. The full name of the bill is "Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001."[15] The purpose of this bill is to prevent future terrorist attacks, and to expand the jurisdiction of police agencies to include foreign individuals linked to terrorism. For example, under this bill, law enforcement agencies have much greater freedom than before to search telephone logs; email communications; and medical, financial, and other records. The USA PATRIOT Act of 2001, Sec. 219, also extended the definition of terrorism to include domestic terrorism.

F. Anti-Tree Spiking Act, 18 USC Section 1864 (Hazardous or injurious devices on Federal lands of 1996)

This amended bill deals with persons who intend to obstruct the harvesting of timber and cause death or bodily injury.

Legal Analysis on Legislation

A comparison of the AEPA of 1992 and the AETA of 2006 demonstrates that the federal courts rarely applied the AEPA of 1992 because of its limited ability to protect animal-enterprise-related businesses and those who worked in these industries. Based on the 18 USC Sec. 43, par. (d), AEPA of 1992, the term "animal enterprise" means "(A) a commercial or academic enterprise that uses animals for food or fiber production, agriculture, research, or testing; … (B) a zoo, aquarium, circus, rodeo, or lawful competitive animal event; … or (C) any fair or similar event intended to advance agricultural arts and sciences." The AETA of 2006 did not change the definition of "animal enterprise" but change how "offense" is defined.

A. Definition Change of "Offense"

The term "offense" was extended by 18 USC Sec. 43, par. (a), par. (1) & (2), AETA of 2006. Originally, the term "offense" defined in AEPA of 1992 included the following elements: "whoever (1) travels in interstate or foreign commerce, or uses or causes to be used the mail or any facility of interstate or foreign commerce for the purpose of damaging or disrupting an animal enterprise; and (2) intentionally causes physical disruption to the functioning of an animal enterprise by intentionally stealing, damaging, or causing the loss of, any property (including animals or records) used by the animal enterprise, and thereby causes economic damage exceeding $10,000 to that enterprise, or conspires to do so; shall be fined under this title or imprisoned not more than one year, or both." As such, AEPA of 1992 only punishes activities whose purpose is to damage or disrupt animal enterprises, which means that only intentional damaging or disruptive activities are punished, but conspiracy is not regulated.

In the AETA of 2006, the new subsection (a) further explains the term "offense" as "whoever travels in interstate or foreign commerce, or uses or causes to be used the mail or any facility of interstate or foreign commerce (1) for the purpose of damaging or interfering with the operations of an animal enterprise; and (2) in connection with such purpose (A) intentionally damages or causes the loss of any real or personal property (including animals or records) used by an animal enterprise, or real or personal property of a person or entity having a connection to, relationship with, or transactions with an animal enterprise; (B) intentionally places a person in reasonable fear of the death of, or serious bodily injury to that person, a member of the immediate family (as defined in section 115) of that person, or a spouse or intimate partner of that person by a course of conduct involving threats, acts of vandalism, property damage, criminal trespass, harassment, or intimidation; or (C) conspires or attempts to do so; shall be punished as provided for in subsection (b)."

B. Changes of the Protection Scope

The new AETA of 2006 also extends the scope of protection from animal enterprises to include businesses associated with animal enterprises. The employees of the animal enterprises and their business associates are now protected under the AETA of 2006. Therefore, compared with the AEPA of 1992, it widens the protection parameters and covers a broader range of parties involved in animal enterprises.

Moreover, the AETA of 2006 also enhances penalties on those who damage the properties of animal enterprises. The article of penalties includes the following items:

1. *Economic damage*—any person who, in the course of a violation of subsection (a), causes economic damage not exceeding US$10,000 shall be fined under this title or imprisoned not more than 1 year, or both.[16]
2. *Significant economic damage or economic disruption*—any person who, in the course of a violation of subsection (a), causes economic damage or economic disruption exceeding US$10,000 but not exceeding US$100,000 shall be fined under this title or imprisoned not more than 5 years, or both.[17]
3. *Major economic damage or economic disruption*—any person who, in the course of a violation of subsection (a), causes economic damage or economic disruption exceeding US$100,000 shall be fined under this title or imprisoned not more than 10 years, or both.[18]
4. *Significant bodily injury or threats*—any person who, in the course of a violation of subsection (a), causes significant bodily injury to another individual or intentionally instills in another the reasonable fear of death or serious bodily injury shall be fined under this title or imprisoned for not more than 5 years, or both.[19]
5. *Serious bodily injury*—any person who, in the course of a violation of subsection (a), causes serious bodily injury to another individual shall be fined under this title or imprisoned not more than 20 years, or both.[20]
6. *Death*—any person who, in the course of a violation of subsection (a), causes the death of an individual shall be fined under this title and shall be punished by death or imprisoned for life or for any term of years.[21]
7. *Conspiracy and attempt*—any person who conspires or attempts to commit an offense under subsection (a) shall be subject to the same penalties as those prescribed for the substantive offense.[22]

Note that the regulations proposed in both AEPA of 1992 and AETA of 2006 focus almost entirely on acts causing property damage or disrupting the operation of animal enterprises.

C. Summary of the Comparisons

In sum, both AETA of 2006 and AEPA of 1992 punish the intentional damaging or any activities with the purpose of damaging properties or interrupting the operation of animal enterprises. However, the AETA of 2006 further broadened its definition regarding intentional damaging activities by adding the aspect of "bodily injury, death, or reasonable fear of person" above and beyond what was previously defined in the AEPA of 1992. Furthermore, conspiracy or an attempt to cause damage or interference on animal-related enterprises also counts as one type of offense. Therefore, the scope of protection regarding animal-related enterprises is extended to cover the earlier "attempt or conspiracy" phase before an attack happens.

Most of the federal regulations refer to the protection or conservation of wildlife and endangered species (Cohen, 2009). The legal protection of farm animals, animals used in experimental laboratories, and pets is hard to find in US legislation. In recent years, most

eco-terrorism activities in the United States have targeted animal enterprises or related institutions. The lack of power and resources of animal protection groups relative to those of animal enterprises possibly led to disproportionate protection favoring animal enterprises. As such, the perceived lack of animal rights protection might be one reason driving the attacks of animal right groups and individuals against these companies.

Eco-terrorism-related Litigation in the United States

The number of attacks committed by radical eco-terrorist groups is different from the number of litigated cases due to the nature of legal procedures. For example, some attacks committed by the same actor or members of an organization will be consolidated into one trial and, consequentially, merged into one case. This section mainly focuses on cases that were sentenced by the US courts because, aside from the United States, most countries do not have specific regulations against eco-terrorism.

Up to the time this chapter was written, there were two cases charged under the Anti-tree Spiking Act, three cases charged under state criminal laws, one case charged under federal law, one civil case, one case charged with the AEPA of 1992, and one case charged with the AETA of 2006. The cases and details are described in the following text.

A. Anti-Tree Spiking Act, 18 USC Sec. 1864 of 1988
(Hazardous or injurious devices on Federal lands)

1. United States v. John P. Blount (1994)   The defendant, John P. Blount, was charged with violating 18 USC Sec. 1864 and Sec. 1361—"Hazardous or injurious devices on Federal lands of 1988"—because he put 384 metal nails (each weighing 500 pounds) on 284 trees in the Clearwater National Forest, Idaho, on March 29, 1989. The national forest is under the jurisdiction of the US federal government, and the trees are also the property of the US government. The final verdict handed down by the US Court of Appeals for the Ninth Circuit in Washington State affirmed the defendant's guilt. The court confirmed that the defendant had intent to injure the value of the trees, which constitutes the element of the "willful injury against property of federal government," and that the illegal tree spikes reduced the harvest value of the forest wood.

One of the key regulations—The Hazardous or Injurious Devices on Federal Lands Act (Anti-Tree Spiking Act)—was passed by the US Congress in 1988. The United States v. John P. Blount (1989) is the leading case where the court defined the spiking activities as constituting elements of "the intent to obstacle or harass the harvesting timber," and confirmed that the nails on the spiked trees on federal lands are "hazardous or injurious device".[23] An individual who has the intention to cause damage to the harvest value of the trees in federal lands is committing intentional injury to federal government property, and using the spikes decreased the economic value of the trees. According to the 18 USC Sec. 1864 subsection (b), the violator "shall be fined or imprisoned for not more than 20 years, or both … (c) if damage to the property of any individual results or if avoidance costs have been incurred exceeding $10,000, in the aggregate." This was the first and only time (as of now) when the federal court adopted Sec. 1864 of the ADA of 1988 in trial and used it against eco-terrorism after the ADA was amended in 1988.

2. United States v. Joel Andrew Wyatt, aka "Lupine"; Rebecca Kay Smith (2005)   The defendants, Wyatt and Smith, are members of Earthfirst!. They established a platform between two trees with polypropylene ropes at the Bitterroot National Forest in Montana and performed "tree sitting" in the platform to obstruct timber harvesting for 4 weeks from July 8 to August 6, 2002. The place where they established the platform was for emergency medical and logging helicopters, and the rope might have endangered their landing and takeoff. The court affirmed that the use of ropes by the defendants was an intentional hazardous behavior to harass timber harvesting, which also constituted the definition of a "hazardous or injuries device" as specified in 18 USC Sec. 1864 (d) (3). The obstructive behavior also negatively impacted federal properties.

B. The Animal Enterprise Protection Act of 1992 (AEPA of 1992)

1. United States v. Stop Huntingdon Animal Cruelty Inc., etc. (2007)   On March 2, 2006, the defendant and six of its members were convicted of terrorism and Internet stalking under the AEPA of 1992. The defendants were charged with engaging in various forms of harassment and intimidation of people associated with Huntingdon Life Sciences for the purpose of stopping animal testing. The defendants were also convicted of conspiracy that violates the AEPA of 1992. All six activists were convicted and sentenced to 4–6 years in prison. The Appeal Court affirmed on March 7, 2011.

C. The Animal Enterprise Terrorism Act of 2006, 18 USC Sec. 43 (a)

1. United States v. William James Viehl (2010)   On August 19, 2008, the defendant, William James Viehl, was charged with damaging and interfering with the operation of the McMullin mink farm located in Southern Jordan and Kaysville, Utah. Specifically, he set over 500 minks free from cages and also destroyed animal pedigree cards in the farm offices. The court confirmed that the defendant's behavior constituted elements of the 18 USC Sec. 43 (a) of AETA of 2006, because he entered two farms in a state and intentionally caused damage to the operations of the farm.

Legal Analysis of Cases in the United States

The cases reviewed in the preceding text not only present the interpretation of the law and incidents made by the federal and state judges and courts but also reveal the judicial opinions on the specific legislation applied in the cases. As mentioned, US courts rarely apply the AEPA of 1992 to the activities of eco-terrorists or their organizations. The cases subject to the Anti-Tree Spiking Act are not only rare but also limited to those events that occur on federal lands. For the tree-spiking events happening on private property, only general state laws of civil wrongful interference (Highland Enterprises, Inc. v. Billy Jo Barker [1999]; Huffman and Wright Logging Co. v. Valeri J. Wade [1991]) or violation of contract law (United States v. Katherine Christianson [2009]) were adopted. In sum, most of the cases that qualified for eco-terrorism were not charged under federal regulations but with general state criminal charges, such as arson, harassment, and intimidation (Teva Pharmaceuticals USA, Inc. v. Stop Huntingdon Animal Cruelty USA [2009]). This suggests that the judicial

and legislative branches at the state level do not share the federal government's willingness to prosecute eco-terrorism. Instead, they follow a more conventional avenue, relying on general state laws to deal with animal-rights-related and environmental-protection-related extremist activities.

The choice of charges in these cases perhaps reflects an underlying view on whether eco-terrorism incidents should be treated like other terrorist incidents. Compared with conventional terrorism that focuses more on causing fatalities and instilling harm and fear in people, these extreme radical environmentalists and extreme animal rights activists rarely caused casualties. The USA PATRIOT Act of 2001 might be the most effective deterrence litigation in combating terrorism (Yang, Su, & Carson, 2014). However, lacking the lethal and harmful elements of terrorism, the radical environmentalists focus on damaging property or facilities with the intent of protecting the environment or animals. Thus, in our judgment, these radical environmentalist and animal rights groups should not be treated the same as those engaged in other terrorist acts and tried under the provisions of the USA PATRIOT Act of 2001.

Reviewing the precedents, most environmental and animal rights cases were processed under criminal charges or civil wrongful interference actions. We believe that the enhancement of penalties and damage compensation as regulated by the AETA of 2006 is sufficient and could balance the economic suffering of the enterprises and businesses targeted by environmental and animal rights groups.

In short, by labeling these radical environmental and animal rights groups or individuals as "terrorists," we do not create any new category of crime based on criminal intention or damages to the victims. These "eco-terrorists" should be protected by the fundamental human rights given to every criminal, instead of being targeted by tactics used to combat truly dangerous terrorists. Thus, we argue that these extreme radical environmentalists and animal rights activists should not be called "terrorists." The title of the AETA of 2006 should also be changed removing the word "terrorism." It is unjust to treat these domestic environmentalist and animal rights groups and individuals as terrorists.

Additionally, our review of animal and wildlife protection regulations reveals that most of the animal protection legislation focuses on wildlife and natural resources conservation. As such, these regulations neglect an important focal concern of radical animal protection groups—that is, to prohibit the usage of animal testing. None of the current US statutes are able to address legitimate concerns about animal testing or provide regulations to limit animal testing enterprises. Because the law seems to ignore these interests, extreme environmentalists or animal rights groups could be seen as justified in continuing direct actions against animal testing enterprises. Therefore, a new proposal to regulate and provide standards for those research enterprises promoting animal rights for testing animals might be a solution to reduce illegal activities in the future.

Conclusion

Most countries have anti-terrorism regulations with a general emphasis, and only the United States has regulations specifically designed to counter eco-terrorism (e.g., the AETA of 2006). Other statutes have also been passed to handle cases related to attacks driven by environmental and animal rights protection, such as the ADA and the AEPA of 1992. In separate quantitative research conducted by the authors, we found that the AETA of 2006 achieved its intended deterrence effects, preventing subsequent eco-terrorist attacks, while the AEPA of

1992 backfired (Yang, Su, & Carson 2014). The different results might stem from the broader coverage of the AETA of 2006 as compared with the AEPA of 1992. The severe punishment of the AETA of 2006 and strict enforcement seems to deter eco-terrorism from happening in the United States. The legal consequences and the severe punishment based on the conspiracy regulations led SHAC to close their operations and change their name to SHAC 7 in 2014. Today, SHAC 7 only supports animal rights protection legislation via their website, without engaging in any further attacks on animal enterprises. In sum, we believe that carefully designed legal regulations could effectively deter eco-terrorism.

With these successful cases, however, many more new conflicts between extreme environmental and animal protection groups and their targets still occur globally. For example, Sea Shepherd has continued their attacks on the Japanese whale-hunting boats operating in the Antarctic Ocean. Their activities have successfully attracted attention from the global community to scrutinize whether the Japanese government fulfills its obligations under the agreement of the International Whale Committee (IWC). The Australian government also confronted Japan about the whaling issue in the International Court of Justice (ICJ).[24] However, the international legal community and politicians have not decided whether to adopt multilateral agreements to deal with cross-border eco-terrorist attacks that occur in the open ocean.

While there are many regulations or treaties designed to protect wildlife or animals in the wilderness, protecting animals in test laboratories has been largely ignored by policymakers. Lacking legal standing and regulations on this subject matter may actually be a major motivation for animal rights groups to take radical action against governments, businesses, and animal enterprises. To reduce future conflicts and potential attacks, governments and legislators around the globe need to think about this issue carefully and consider the possibility of creating standards and ethical rules to protect animals used in experimental testing.

Notes

1   In the Codebook of the Global Terrorism Database (GTD), it is argued that violence against property that leads to irreversible damage is also a form of violence (GTD, 2015).
2   Huntingdon Life Science, available at https://www.huntingdon.com/(accessed on January 30, 2015).
3   USA v. Fullmer, 584 F. 3d 132 (2009)
4   Paul Peachey, Animal rights group ends 15 years campaign against experiment at Huntington, *The Independent*, August 24, 2014. http://www.independent.co.uk/news/uk/crime/animal-rights-group-ends-15year-campaign-against-experiments-at-huntingdon-9687843.html (accessed on January 30, 2015).
5   Acts of Ecoterrorism by Radical Environmental Organizations Hearing before the Subcommittee on Crime of the Committee on Judiciary, House of Representatives, 105th Congress, 2nd Session, June 9, 1998, serial No. 142. Available at http://commdocs.house.gov/committees/judiciary/hju59927.000/hju59927_0.htm (accessed on January 30, 2015). A new proposal "AEPA of 2002" to amend the AEPA of 1992 was raised after the hearing, but failed.
6   The Animal Enterprise Terrorism Act of 2006 (AETA of 2006), 18 USC Sec. 43. (d) definition. As used in this section—(1) the term "animal enterprise" means—(A) a commercial or academic enterprise that uses or sells animals or animal products for profit, food or fiber production, agriculture, education, research, or testing.
7   ibid.

8 ibid, Sec. 43. (a) (2) in connection with such purpose—(A) intentionally damages or causes the loss of any real or personal property (including animals or records) used by an animal enterprise, or any real or personal property of a person or entity having a connection to, relationship with, or transactions with an animal enterprise; (B) intentionally places a person in reasonable fear of the death of, or serious bodily injury to that person, a member of the immediate family (as defined in Sec. 115) of that person, or a spouse or intimate partner of that person by a course of conduct involving threats, acts of vandalism, property damage, criminal trespass, harassment, or intimidation; or (C) conspires or attempts to do so.

9 EU, Council Framework Decision of June 13, 2002, on combating terrorism, OJ L 164, 22/06/2002 P. 0003–0007. http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX: 32002F0475 (accessed January 30, 2015).

10 Jarboe, F., James, Federal Bureau of Investigation. "*Testimony*". http://www.fbi.gov/news/ testimony/the-threat-of-eco-terrorism (accessed January 30, 2015)

11 ibid., Sec. 1964, (C).

12 ibid., Sec. 1961, (1).

13 ibid., Sec. 1961, (4), "'enterprise' includes any individual, partnership, corporation, association, or other legal entity, and any union or group of individuals associated in fact although not a legal entity."

14 Fur Commission USA, "Report to Congress on the Extent and Effects of Domestic and International Terrorism on Animal Enterprises", *The Animal Enterprise Protection Act of 1992 and Mandated Report (1993, October)*. http://www.furcommission.com/the-animal-enterprise-protection-act-of-1992-and-mandated-report/(accessed January 30, 2015).

15 Department of Justice, text of the USA PATRIOT Act, "Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001." http://www.gpo.gov/fdsys/pkg/PLAW-107publ56/pdf/PLAW-107publ56.pdf (accessed January 30, 2015)

16 *Supra* note 8, (b), para. (1), subpara. (B).

17 ibid, subsection (b), para. (2), subpara. (A).

18 ibid, subsection (b), para. (4), subpara. (B).

19 ibid, subsection (b), para. (2), subpara. (B).

20 ibid, subsection (b), para. (4), subpara. (A).

21 ibid, subsection (b), para. (5).

22 ibid, subsection (a), para. (2), subpara. (C).

23 United States v. John P. Blount, 35 F. 3d 572 (9th Cir. 1994).

24 Australia v. Japan: New Zealand Interning (March 31, 2014, ICJ) http://www.icj-cij.org/docket/ index.php?p1=3&p2=1&case=148&code=aj&p3=4 (accessed on January 30, 2005)

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On the Relevance of Cyber Criminological Research in the Design of Policies and Sophisticated Security Solutions against Cyberterrorism Events

David Maimon and Alexander Testa

Reports that say that something hasn't happened are always interesting to me, because as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns—the ones we don't know we don't know. And if one looks throughout the history of our country and other free countries, it is the latter category that tend to be the difficult ones. – Donald Rumsfeld

Introduction

Although empirical research on terrorism has expanded dramatically since the 1970s, it has only been recently that criminologists began to apply rigorous research designs and sophisticated methodologies in the study of this social phenomenon (LaFree & Freilich, 2012). Supported by extensive governmental funding and the availability of detailed data on terrorist groups and their operations, contemporary criminological research explores various aspects of this phenomenon, including assessing the effectiveness of counterterrorism policies in preventing terrorist operations (LaFree, Dugan, & Korte, 2009; Dugan and Chenoweth, 2012), identifying the geographical locations in which terrorist attacks are more likely to occur (LaFree & Bersani, 2014), and analyzing the distribution and diffusion of terrorist attacks across geographical regions (Braithwaite & Li, 2007; LaFree et al., 2012).

However, one emerging issue that still has not been empirically studied by criminologists is cyberterrorism. Granted, the theoretical nature of this threat to our society (no cyberterrorist act has been reported until the time of this writing) complicates the task of developing a body of empirical evidence that is dedicated to understanding cyberterrorists and their online illegal operations (although cyber attacks of sovereign countries against other countries have been recorded in the past, attacks by state-actors do not qualify as terrorism). It also challenges security experts' quest for identifying effective security practices against this threat. Nevertheless, the emergence of new interdisciplinary research designs that seek to generate a comprehensive and context-embedded understanding of computer users and

hackers within the criminological literature (Maimon et al., 2014, 2015; Wilson et al., 2015; Holt et al., 2012) suggests that criminologists could help develop security solutions and policies against potential cyberterrorism threats. Specifically, we propose that, since cyberterrorism involves attacks against computers, networks, and the information they store and transfer (Denning, 2001), it forms a special case of computer-focused crimes (i.e., crimes that could not exist in the absence of computer technology), and could be influenced by the same security practices and policies that are designed to protect organizations and their computer users from cyber attacks. Thus, we suspect that knowledge regarding the online behaviors of computer attackers and response to situational stimuli on an attacked computing environment may prove useful in (1) reducing detection time of cyber attacks on vulnerable computer systems, and (2) mitigating the consequences of cyber attacks against computing environments. Efforts to develop more effective and sophisticated security solutions (including policies and tools) against cyber attacks (including cyberterrorism) should employ an evidence-based approach and draw on criminological theories and research designs.

We begin this chapter by defining the concept of cyberterrorism, and explaining why the vulnerabilities of Supervisory Control And Data Acquisition (SCADA) computers are of major concern for cyberterrorism experts. We next elaborate on what is still unknown about cyberterrorism, and propose avenues through which criminological theories and cybercrime research could be used to investigate some of these puzzles. Thereafter, we speculate regarding the unknown-unknowns of cyberterrorism (i.e., things we do not know because we lack the capability to learn about them), and discuss ways for building capabilities to elucidate these unknowns. We conclude with recommendations for how to initiate and test policies that seek to reduce the risk of cyberterrorism.

Known-Knowns: What do We Know about Cyberterrorism?

Contemporary definitions of cyberterrorism range from narrow to broad. Narrow definitions categorize politically motivated attacks by non-state actors against computer systems and networks, which result in violence against civilian targets as acts of cyberterrorism (Pollitt, 1998; Kenney, 2015; Weimann, 2005). Broader definitions, on the other hand, suggest that cyberterrorism involves a wide range of terrorists' use of the Internet and encompasses almost any use of information technology by terrorists (National Conference of State Legislatures, 2002). Since we believe that terrorists' use of computers and the Internet to support their conventional terrorist activities (e.g., recruitment, propaganda, commination, and data mining) does not necessarily involve the exploitation of computer technology as a target, we embrace Denning's narrow (2001) definition. Denning defines *cyberterrorism* as "unlawful attacks and threat of attack against computers, networks, and the information stored therein when done to intimidate or coerce a government or its people in furtherance of political or social objectives. Further, to qualify as cyberterrorism, an attack should result in violence against persons or property, or at least cause enough harm to generate fear." Consequently, we do not consider terrorists' use of the Internet for gathering intelligence on potential targets, acquiring skills for building explosives, or communicating with other terrorists as cyberterrorism activities. Instead, the use of computer technology to harm or shut down the critical infrastructure of a nation by a politically motivated actor is qualified as cyberterrorism in our work (Bologna et al., 2013; Kenney, 2015; Weimann, 2005).

Overall, national critical infrastructure is comprised of systems and facilities that are so vital for the survival of a nation (e.g., energy, transportation, banking, and emergency services) that their incapacitation or destruction would severely impact a nation's defense or economic security (McQuade, 2006). Increasingly, critical infrastructures rely on computer technology and computer networks for their smooth operations (Brodsky & Radvanovsky, 2010). Therefore, cyber security experts believe that potential acts of cyberterrorism against SCADA computers pose a serious threat to the security of nations, and should be addressed by the security community.

SCADA systems are centralized computers that monitor and regulate the operation of most critical infrastructure industries by adjusting, switching, manufacturing, and controlling key processes based on digitized feedback of data gathered by sensors (Wilson, 2008). These control systems are often placed in remote locations of the critical infrastructure; are accessed by engineers or technical staff via telecommunication links periodically; and are increasingly connected to the Internet (either directly or indirectly via internal networks that are connected to the Internet) to efficiently operate (Brodsky & Radvanovsky, 2010). Unfortunately, the connectivity of SCADA computers to the Internet makes them vulnerable to attacks, because anyone can access them anonymously from anywhere around the globe. In fact, Sieber and Brunst (2008) report that around 17% of SCADA computer malfunctions are caused because of their direct connection to the Internet. Moreover, these computers (as with any other computers) have their own vulnerabilities (i.e., weaknesses or flaws in computer systems and software that leave them open to attack). Unless identified rapidly and patched correctly by information technology (IT) teams, these vulnerabilities could be subject to cyberterrorist attacks (Bologna et al., 2013; Wilson, 2014).

Once access is gained to a SCADA system of a critical infrastructure, a system trespasser can initiate a range of operations on the attacked computer systems. These operations include delaying (or even blocking) the flow of information through the networks supporting the SCADA systems, making unauthorized changes to programmed instructions within the SCADA systems, sending falsified information to the SCADA systems' operators to disguise unauthorized and damaging activity on systems, and hampering the operation and processing of safety systems (Brodsky & Radvanovsky, 2010). Three potential scenarios that are commonly discussed by terrorism experts as realistic possibilities that could be taken into consideration by cyberterrorists are attacks on hydroelectric dams, attacks on traffic control systems, and attacks on power grids (Brunst, 2010; Rege et al., 2014). Each of these attacks can be noticed immediately and can generate substantial fear within a population.

Fortunately, to date, not a single act of cyberterrorism has been reported around the world (Kenney, 2015). Nevertheless, computer attacks against SCADA computers have already been recorded, and have resulted in physical damage to property and the environment. The Stuxnet worm, for instance, targeted SCADA computers used at Iran's uranium enrichment facility in Natanz by manipulating the operation of the centrifuges while signaling to the operators that the centrifuges were working properly (it is believed that this work was created jointly by the United States and Israel) (Kenney, 2015). Similarly, in 2000, a system-trespassing event caused by a disgruntled employee working on the SCADA system of a water treatment facility in Queensland (Australia) resulted in the release of 800,000 gallons of sewage water into adjacent rivers and parks, and the destruction of marine life in the area (Abrams & Weiss, 2008). Although these computer attacks (and others not discussed in our chapter) are not acts of cyberterrorism per se (since they did not intend to instill fear in large audiences), they still suggest that infiltration, exploitation, and manipulation of SCADA computers by professional hackers is possible. These attacks could

result in serious financial and physical damage. As such, terrorists may aspire to follow system trespassers' lead and develop the knowledge and skill set required for infiltrating governmental, financial, and even military computers and inflict massive damage to a country's infrastructure (Weimann, 2005). Moreover, with the growing availability of paid hacking services (Ollmann, 2008; Wilson, 2008) and the availability of information about SCADA systems over the Internet (Brodsky & Radvanovsky, 2010), there is a risk that terrorists will hire professional hackers and professional organized crime groups who specialize in the commission of computer-focused crimes to attack SCADA computers and inflict damage on their behalf (Borland, 1998; Brunst, 2010; Hutchings, 2014).

Overall, computer-focused crimes are illegitimate online activities that emerge as a direct result of computer technology and could not exist without it (Furnell, 2002). The most common types of computer-focused crimes identified by criminologists are system trespassing (or hacking), website defacement, distributed denial-of-service (DDoS) attacks (i.e., attacks designed to deny legitimate users access to computer networks and its resources), and distribution of malicious software (i.e., viruses, worms, and Trojans). The potential harms from these computer attacks to victims depend upon the offender's motivation(s) (e.g., monetary gain, revenge, risk seeking and thrill, political ideology). These attacks range in seriousness from benign purposes such as conducting basic queries on the Internet to active manipulation of essential files on the target system (Stallings, 2005; McQuade, 2006). Importantly, although the motivations for cyber criminals' engagement in computer-focused crimes often differ from terrorists' motivation to engage in cyberterrorism, the methods they both use to attack SCADA computers will be similar (independent of the potential consequences to society). Specifically, both computer-focused crimes and cyberterrorism involve similar attack methods, tools, and attack patterns to victimize computer technology. As a consequence, defending the SCADA computers of critical infrastructures from both types of computer attacks require a similar set of skills, tools, and policies from IT teams. However, given that cyberterrorism has never occurred, and that the links between computer hackers (i.e., computer-focused criminals) and terrorists are difficult to determine, we believe that the efforts of the government, industry, and financial sectors to protect their computing environments from future acts of cyberterrorism should be guided by insights regarding the online behaviors of cyber criminals. Moreover, we propose that criminological research that seeks to explore the development and progression of computer-focused crimes should generate insights regarding the "known-unknowns" surrounding the online behaviors of cyber criminals and cyberterrorists, and guide policies and security solutions to prevent and mitigate cyber attacks.

Known-Unknowns: What do We Still Need to Know About Cyberterrorism?

Indeed, extensive technological research has identified numerous vulnerabilities in computer systems and networks that put would-be targets of cyberterrorism and computer-focused crimes at risk (Salas & Martins, 2014; Mckey, 2003; Rehman & Abbasi, 2014; Van Acker et al., 2014). Some of the most common vulnerabilities identified on SCADA computers, for instance, include buffer overflow (i.e., inputting more data than can be contained in the transitional memory built to speed up IT processes ["buffer"], until the program crashes); authentication and key management (i.e., implantation of poor passwords and authentication policies); and remote code execution and local privilege escalation (Bologna et al., 2013).

The most common solutions for these vulnerabilities emerge from technical research and involve the implementation of mathematical models and tools (Rege et al., 2014). We believe that more sophisticated security solutions should be used to prevent and mitigate the consequence of such attacks by understanding attackers' behaviors on these systems (Maimon et al., 2014).

Specifically, in contrast to the assumption of most technical research that perceives cyber attackers as passive actors who merely run static commands while attacking computer systems, there is enough empirical evidence to suggest that computer attackers are rational human beings who learn from their experiences, react to the attacked computing environment, and adapt to it accordingly (Png & Wang, 2009; Rege et al., 2014; Wilson et al., 2015). Therefore, it is critical to understand how cyber attackers select their targets, plan and launch their attacks, as well as respond to situational stimuli in different computing environments when we tailor preventive and reactive security measures to SCADA computers. Consequently, we see value in understanding not only what computing resources are required to counter DDoS attacks against SCADA computers (Califano, Dincelli, & Goel, 2015), but also questions such as whether DDoS attacks are more likely to target SCADA computers during a military campaign of country A against country B than during peaceful times. Similarly, it is important to both assess the damage generated by system trespassers on attacked computer systems (Kizza, 2015), and investigate which computing environment's characteristics make system trespassers feel anxious on an attacked SCADA system and potentially expose their presence on the system. Finally, while it is important to answer which exploitable vulnerabilities expose SCADA computers to cyber attacks (Bologna et al., 2013), it is equally important to ask how operators and IT managers of SCADA computers expose these computers to attacks. Failure to incorporate knowledge on the online behaviors of cyber attackers and cyberterrorists prior to, during, and after an attack would lead to the development of security practices and tools that are only partially effective. Instead, a broader focus on the full sequence of activities that encompass cyber attacks and cyberterror events can lead to a more comprehensive understanding of the attackers' behavior and more effective policy solutions.

Furthermore, to take a more holistic approach for designing security solutions against future cyberterrorism attacks on SCADA computers, security managers should not draw solely on their own experiences and professional backgrounds, and should instead employ an evidence-based approach for cyber security. By taking this approach, IT managers in critical infrastructure facilities should assess the empirical evidence available about the effectiveness of security measures and policies in preventing and mitigating the consequences of cyber attacks, as well as generate their own evaluation of these security measures. Insights from the criminological discipline could support this holistic approach by (1) offering theoretical understanding regarding potential influences on the online behaviors of cyber offenders and cyberterrorists, and (2) supporting unique research designs that allow the study of cyber attackers in the environment in which they operate.

Key Criminological Theories for Guiding Cyberterrorism-related Research and Policies

Although past criminological theory and research were mainly focused on understanding the motivations of criminals to offend (e.g., Akers, 1985; Hirschi, 1969), beginning in the early 1980s, there has been a growing interest among criminologists to generate knowledge regarding unique situations that trigger criminal behaviors, and those that reduce the

volume of crime (Cohen & Felson, 1979; Clarke, 1995). This body of knowledge is relevant in the context of designing better security solutions against cyber attacks and cyberterrorism as it can improve our understanding of situations and environments that are effective in influencing the behaviors of system trespassers on an attacked computer system. Two criminological theories that have guided this line of research and which could be useful in generating insights on cyber attacks against SCADA computers are (1) the deterrence theory and (2) the situational crime prevention perspective.

Deterrence Theory

Extensive theoretical literature has debated the effectiveness of deterrence strategies (including threat of retaliation) in preventing the occurrence of cyber attacks (Elliott, 2011; Goodman, 2010; Geers, 2012; Harknett, 1996). While we acknowledge that cyber deterrence may be problematic for preventing cyber attacks, it could be that, compared with less threatening computing environments, more threating environments may support the detection of system trespassers on SCADA computers more rapidly.

In general, deterrence theory has its roots in the writings of the eighteenth-century philosopher Cesare Beccaria (1963 [1764]), who proposed that humans are self-interested and rational decision-makers, driven in their actions by an economical "hedonistic calculus," whereby they act so as to maximize pleasure and minimize pain. This theoretically renders individuals open to "deterrence," inasmuch as raising the costs of a behavior through sanctions should lower their willingness to pursue that course of action. Ultimately, the theory predicts that when the costs of any behavior outweigh the benefits, an individual should refrain from acting altogether (Beccaria, 1963 [1764]). Importantly, different aspects of punishments are believed to shape their effectiveness in preventing individuals' involvement in crime. Specifically, public, certain, severe, and swift punishments are perceived to be more effective in deterring criminal behaviors (Beccaria, 1963 [1764]). While contemporary branches of deterrence theory have elaborated different aspects of deterrence (including the impact of punishment avoidance on an individual's decision to initiate a criminal event, the distinction between objective and subjective sanctions, and the difference between informal and formal sanctions in deterring individuals' involvement in crime), the most promising theoretical development in the context of detection of cyberterrorism and cyber attacks against SCADA computers is embedded in Gibbs's (1975) concept of restrictive deterrence.

Gibbs (1975) defines *restrictive deterrence* as the (partial) curtailment of a certain type of criminal activity to reduce the risk of punishment. According to Gibbs, one approach that criminals take in an effort to curtail the scope of their criminal behavior is a reduction of repeat offending (i.e., probabilistic restrictive deterrence). Gibbs assumed that, in an effort to reduce the probability of detection and arrest, offenders reduce the frequency of their criminal acts. In addition to the probabilistic aspect of restrictive deterrence, Jacobs (1993) stresses that restrictive deterrence may not always effect a net reduction in crime, but in some instances may merely cause its displacement to other points in time and space that are perceived by offenders as constituting less of a risk for punishment. In line with this point, Jacobs (2010) delineated three additional particularistic ways in which restrictive deterrence may affect criminal behavior: first, where the offender commits acts of reduced severity to minimize punishment severity; second, where the offender engages in situational measures to try and avoid detection or arrest; and, finally, where the offender displaces his or her activity to another time or place.

All in all, there has been a considerable body of theoretical work in the realm of cyber-defense questioning the potential for deterrent strategies to effectively prevent cyber attacks (Goodman, 2010). This work suggests that the main problem with deterring cyber attacks is a lack of both capability and intent demonstrated by the legal system when it comes to tackling and punishing (especially small-scale) cybercrime. Moreover, Harknett (1996) states that perhaps the greatest problem for cyber-deterrence is that the inherently anonymous nature of cyberspace drastically increases the ability of individuals to avoid detection. Thus, the credibility of legal responses to cyber threats is undercut both by the relative scarcity of prosecutions brought against cybercrime, and (with the exception of a couple of high-profile cases) by the reluctance of the criminal justice system to invoke legal provisions to their full extent when individuals are prosecuted.

Nevertheless, cyber deterrence is not necessarily a "lost cause." There has been some argument that it is not necessary to identify specific individuals for deterrence to take effect (Goodman, 2010). Online offenders have generally been presumed to demonstrate rational decision-making, evidenced by their actions. Png and Wang (2009) for instance, suggest that, although system trespassers seem to be indifferent to the degree of uncertainty in two similar targets, they still attempt to maximize their expected net benefit from their cyber operations by direct efforts against targets that provide the maximum return and minimum risk. Maimon and colleagues further discuss the potential for deterrence in cyberspace (2014). Specifically, as subsequent intruder behavior, these scholars investigated the influence of a warning banner displayed upon entry to an attacked computer system. They found that such a warning banner reduced the duration of both first and repeated system-trespassing incidents.

Advancing the view that restrictive deterrence may shape the development and progression of cyber attacks against SCADA computers, we propose that the presence of immediate and subsequent risks in the attacked computer environment may influence cyber attackers' and cyberterrorists' fear of being detected and caught, and will result in activity patterns that could expose their presence on the attacked SCADA system more rapidly.

Situational Crime Prevention Perspective

Situational crime perspectives are focused on the occurrence and development of criminal events. The underlying premise of situational crime perspectives is that, because criminals are rational creatures who weigh the costs and benefits of their behaviors, successful crime prevention efforts must involve the design and manipulation of human environments to make the decisions of offenders to get involved in crime less attractive (Clarke, 1995). Emphasizing the centrality of offenders' decision-making processes in determining involvement in deviance and crime, Clarke (1995) differentiates between individual decisions to become involved in crime (i.e., criminal involvement) and decisions to become involved in a particular crime (i.e., criminal event). According to Clarke (1995), individuals first decide whether they are willing to become involved in crime. This decision is largely influenced by past learning and experiences (including moral code) and a range of background characteristics (demographic and social). Once the choice to get involved in crime is made, individuals need to decide to commit particular offenses. This decision is largely dependent on the immediate situations that individuals encounter.

Importantly, Clarke (1995) acknowledges the prevalence of situations conducive to crime in the lives of most people, and the commission of risky behaviors and illegal acts by both "ordinary citizens" and "hardened offenders." Incorporating this insight with the notion

that the decision to initiate a risky behavior is induced by the absence of moral opprobrium attached to criminal opportunities, Clarke contends that offenses such as trespassing and theft may be effectively prevented by increasing the pressure to comply with the law. Specifically, Clarke suggests that, since ordinary people rationalize their legal and illegal conduct, presentation of cues that alert offenders' conscience at the point of contemplating the commission of an illegal act may prevent the act from occurring. Such environmental cues should involve inexpensive means to reduce crime by increasing offenders' efforts and risks, reducing anticipated rewards and provocations of crime, and removing excuses and justifications for crime (Cornish & Clarke, 2003; Wortley, 2002).

Unfortunately, only scant research has looked at the effectiveness of the techniques proposed by Clarke in preventing and reducing cyber attacks against computer systems. Nevertheless, a recent study by Wilson and colleagues (2015) indicates that the presence of a surveillance banner in an attacked computer system reduces the probability of commands being typed in the system during first system-trespassing incidents (Wilson et al., 2015). They also found that the probability of commands being typed during subsequent system-trespassing incidents (on the same target computer) is conditioned by the presence of a surveillance banner and by whether commands have been entered during previous trespassing incidents (Wilson et al., 2015). Further investigation of situational crime prevention strategies in the context of system-trespassing events may result in a list of technical solutions and policies that will mitigate the consequence of system-trespassing events on SCADA computers.

Methods for Data Collection

A major barrier to the study of cyberterrorism and cyber attacks against SCADA computers is the lack of empirical data that would enable a deeper understanding of this issue. Importantly, terrorism scholars prior to the 9/11 terrorist attacks experienced a similar difficulty, when the amount of academic research on domestic and international terrorist incidents was relatively modest. However, in the years following the attack, academic publications on terrorism skyrocketed (Silke, 2007). Although there are a number of factors associated with the increased focus on the study of terrorist activity, an enhanced focus on data collection and the availability of comprehensive datasets such as the Global Terrorism Database (GTD) undoubtedly play key roles in the growth in empirical terrorism studies (LaFree & Dugan, 2007; LaFree, Dugan, & Miller, 2014). While the lack of recorded cyberterrorist events to date inhibits the ability to generate a "GTD of cyberterrorism," there are still a number of data collection tools that can enhance the capability of researchers to study the issue of cyberterrorism. We suggest two avenues of data collection: (1) collection of data directly from the Internet, and (2) deployment of scientific experiments in cyber space. Importantly, in the absence of a reliable way to distinguish between cyber attacks and cyberterrorism acts, and since both cyber attackers and cyberterrorists would follow similar attack phases to gain access to a SCADA system (Maimon et al., 2015), both proposed methods of data collection should collect data on cyber attacks in general.

Data Collection from the Internet

One possible method for collecting data on cyber events is to use technical tools that indicate the presence of cyber attacks on computer systems, and append these databases to

external sources of "social data" that allow the prediction of cyber attacks against SCADA computers. For instance, Maimon et al. (2013) assess the nature of a variety of cybercrime attacks launched against a large university, using data collected by the university's intrusion prevention system (IPS). An IPS is a device designed to monitor a computer network's traffic to detect and prevent malicious attacks and intrusions on the network (Stiawan, Abdullah, & Idris, 2010). Using the data collected by the IPS, the authors found that computer attacks were most likely to occur during the university's official business hours, and that the number of other nationality network users at the university was associated with an increase in attacks originating from Internet Protocol (IP) addresses associated with these users' countries. A similar procedure could be deployed in the context of computer networks of critical infrastructure facilities. Data collected by Cisco NetFlow software (i.e., a software that captures information about network activity and that is available to system administrators) could also serve as a source of Internet data (Spognardi et al., 2014; Chakravarty et al., 2014). Industries that are targets for cyber attacks and cyberterror can use such devices to gather information on the flow of network data; monitor attacks on the system; and, followed by appending social data, decipher whether potential attacks are more likely to occur in specific times and be associated with certain terrorist organizations or hacker groups.

Experiments

Another promising avenue for collecting data on cyber attacks against SCADA computers involves the deployment of experimental research designs to track online tactics used by cyber attackers and potential cyberterrorists. Although not a panacea for unveiling complex issues of causal inference (Sampson, 2010), the utility of experimental designs in generating greater understanding of key issues in criminology (Sherman, 2009; Weisburd, 2010), as well as expanding knowledge about the behavior of hackers in cyberspace, has been well demonstrated (Maimon et al., 2014; Wilson et al., 2015).

Indeed, over a decade ago, David and Sakurai (2003) proposed the creation of a cyber security center that would deploy a vulnerable network of systems attractive to cyber attackers to bait attacks and subsequently monitor the behavior of cyberterrorists and gain insight to their motivations, tactics, and techniques. Today, the technology and infrastructure is readily available to design and deploy such experiments. Maimon and colleagues (2014, 2015) have designed several experiments to assess the nature of cybercrime. In these "honeypot" experiments, computers were deployed with vulnerabilities in the security structure to enable entry into the network by prospective cyber attackers. Once on the system, attacker behavior was monitored and data collected regarding key information such as the location of the attackers' IP addresses, and the techniques and tactics that attackers use—such as the amount of time spent on the system, keystroke commands used, and the time and dates in which attackers entered and exited the network, among other useful metrics regarding the attacker's behavior. Moreover, various mechanisms aimed at deterring adverse behavior on the system can be deployed to gauge attackers' responses to sanction threats intended to curtail illicit activity.

While such honeypot experiments provide useful information about cybercrime, similar designs could be deployed in environments attractive to cyberterrorism to expand research in this area (David & Sakurai, 2003). Networks can be deployed in potential "hot-spot" areas such as hydroelectric dams, traffic control systems, and power grids, or

other key areas including major banking and financial institutions or sectors of mass transportation such as airlines or metropolitan subway systems. Moreover, we suspect that knowledge gained by the honeypot experiments that focus on system-trespassing events in general could be implemented in the context of SCADA computers. Accordingly, this research could then be used to assist IT teams' efforts to design more sophisticated security solutions.

Unknown-Unknowns: What We do not Know that We do not Know about Cyberterrorism

Given that there is no history of cyberterrorism to date, the greatest challenge is that there is a great deal that we do not know about the potential harm created by cyberterrorism and the possible attacks that could be launched. While there is much discussion about large areas of infrastructure (i.e., power grid [Rege et al., 2014]) that could be targeted by cyberterrorists, there are a number of areas in which we lack the capacity to even know if there is a problem. We next provide a brief overview of less discussed areas that may remain vulnerable to cyberterrorism and cyber attacks. While we may not be able to predict all vulnerabilities, empirical and theoretical research on cyber attacks can serve as critical tools that expand the horizon of potential threats and aid in fostering sophisticated security measures to curtail cyberterrorism.

One potential area that has received limited attention is the threat of cyberterrorist attacks targeting automobiles. In recent years, speculation has begun regarding the relative ease of hacking cars equipped with computer technology. Such attacks could have the potential to render the car immobile, as well as increase or decrease speeds, remove braking capacity, or force cars to maneuver against the intentions of the driver (Markoff, 2011). The possibility of remotely accessing cars became national news briefly in the wake of a 2013 car crash that killed journalist Michael Hastings, after which a surge of conspiracy theories proclaimed that the accident was an assassination carried out by remote access of the automobile. Even Richard Clarke, former US national coordinator for security, infrastructure protection, and counter-terrorism, weighed in by stating that what was known about the single-vehicle crash appeared to be consistent with a car cyber attack, and that intelligence agencies of several countries—including the United States—know how to remotely seize control of a car (Hogan, 2013). Notably, car manufacturers are aware of these threats and are taking precautions against vulnerabilities to cyber attacks. However, with rapidly advancing technological features in automobiles and the growing reality of sharing the road with self-driving cars, the potential for harm resulting from a cyberterror-related accident on a major highway remains poorly understood.

Another sector facing unknown vulnerabilities is healthcare and hospitals. As major hospitals become increasingly reliant on technology to function, cyber attacks may take numerous forms with dire consequences. Such attacks could include taking down a hospital computer system or manipulating an instrument to administer incorrect doses or types of medication to a patient. Most attacks on hospitals have centered on the theft of personal records and files; however, the possibility of an attack on the infrastructure of the hospital resulting in the potential loss of life is feasible. Recently, Harries and Yellowlees (2013:61) assessed the possibility of a cyberterror attack on the health care sector, concluding that "there is evidence to suggest that cyber threats are increasing and that much of the US healthcare system is ill equipped to deal with them." Accordingly, it remains unclear just

how susceptible hospitals and the healthcare sector are to a cyberterror attack, and what degree of harm could arise from such an attack.

Finally, events on July 8, 2015, provide context for the unknown effects and the capacity of officials to handle cyber attacks on major sectors of the US economy when trading on the New York Stock Exchange halted due to an apparent computer glitch. Around the same time, hundreds of United Airways flights were forced to be grounded due to an unrelated computer glitch. While neither issue is thought to be the result of malfeasance, the coincidental malfunction of critical technology at major financial and transportation industries led many to speculate that the United States was not ready to handle a cyber attack on a major sector of the economy. These events also unveil the potential unknown harm that could follow a successful terror attack that shut down trading on the stock market or grounded flights for hours, days, or weeks.

Still, while it is clear that both private businesses and government offices may be vulnerable to cyber attacks, it is less certain whether terrorist organizations have the capacity to carry out such attacks. Currently, experts doubt that terrorist organizations are able to launch a major cyber attack against the United States or other Western nations, but that trend may be changing. For instance, regarding that ability of the terrorist organization ISIS to execute a cyberterrorist attack, terrorism scholar J. M. Berger notes, "they [ISIS] have not yet been extremely visible carrying out more sophisticated activities such as high-level cybercrime or more destructive attacks, but I suspect this is just a matter of time" (Graham-Harrison, 2015).

Future Research/Public Policy Recommendations

As indicated throughout this book, the application of criminological theory and sophisticated methodological approaches have contributed to an enhanced understanding of terrorist activities (LaFree & Dugan, 2004; Freilich & LaFree, 2015). We believe that criminology has much to offer to the study of cyberterrorism and should be useful for generating insights on cyber attacks against computer systems and networks. However, for this contribution to be meaningful for both criminologists and security experts, a few important steps should be taken.

First, a tighter collaboration should be facilitated between the private sectors that control the critical infrastructure most vulnerable to cyber attacks and the academic and governmental sectors. For instance, scholars can seek to partner with private companies to deploy experiments on their networks to detect the possibility of cyber attacks and understand tactics that attackers use. In turn, criminologists can draw on criminological theory and research to assist private industries in developing strategies that will reduce vulnerability to both cyber crime and cyberterror attacks.

Second, criminologists should work with computer scientists and engineers in a partnership that will combine unique skillsets and provide a greater understanding of cyber attacks and cyberterrorism incidents. Such partnerships can be particularly useful in the creation of experiments or collection of data on cyber attacks, as such endeavors often require sophisticated computer programming skills to build the framework needed for experiments, as well as for understanding the complex techniques and activities carried out by attackers in cyberspace. In return, criminologists can offer knowledge of social science theory to contribute to the design of experiments and methodological approaches to analyze the behavior of cyber criminals and cyberterrorists.

Finally, there are a number of insights from the criminological study of cyber crime and terrorism that suggest effective policies to deter cyberterrorist activity. One set of interventions draws from principles of rational choice/deterrence theory by seeking to raise the expected cost of engaging in cyberterrorism. For instance, Dugan, LaFree, and Piquero (2005) found that the increased use of metal detectors and law enforcement at passenger checkpoints at airports were two policy interventions that decreased airline hijackings by increasing the certainty of apprehension. Following this framework, strategies can be developed to increase the perceived certainty of detection in cyberspace as one means to reduce the likelihood of a cyberterror event. Alternatively, policy interventions can aim to deter attacks by increasing incentives of not engaging in cyberterrorism. Crenshaw (1987) suggests offering non-violent incentives to individuals in terrorist organizations as a means to provide an opportunity out of the organization. Such a strategy in relation to cyberterrorism could entail providing legitimate employment opportunities or cash incentives to individuals with strong computer skills involved with or at risk of joining terrorist organizations. On a related point, Dugan and Chenoweth (2012) find that conciliatory actions such as making concessions or cooperating and negotiating with an opponent are effective strategies at reducing terrorist activity by raising the expected utility of abstaining from terrorism. Thus, in developing strategies to combat cyberterrorism, policymakers should take lessons from advances in research on terrorism and consider a mixture of policies that both enhance the costs of engaging in cyberterrorism, as well as the benefits of not engaging in cyberterrorism.

In sum, cyberterrorism is currently perceived as a theoretical threat to the United States. Nevertheless, due to the motivation of terrorist groups to attack America's critical infrastructure, as well as the vulnerability of SCADA systems to cyber attacks, we have strong reasons to believe that, if not addressed appropriately, a "cyber 9/11" will indeed happen. Since it is likely that cyberterrorists will use similar attack tactics and methods to those used by cyber criminals when attacking SCADA systems (as well as other sensitive computers), we propose to draw on criminological models and research methods when designing sophisticated security solutions that aim to prevent, detect, and mitigate the consequences of these attacks. Such security solutions should consider both the technical and human aspects of the problem, and employ an evidence-based approach to assess their effectiveness.

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