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INTRODUCTION

Measurement Issues in the Study of Terrorism: Introducing the Special Issue

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ABSTRACT

In this article, we introduce readers to a special issue of *Studies in Conflict & Terrorism* on measurement issues in the study of terrorism. In recent years scholarly interest in terrorism has increased and systematic methods are now more commonly used. Terrorism works that analyze data highlight substantive findings as opposed to measurement issues. A study's substantive findings are only meaningful though if it correctly addresses the measurement issues that invariably arise during the research process. In addition to summarizing the eight articles in this special issue, we outline the strengths and weaknesses of various measurement strategies and assess their contributions to our understanding of terrorism. The major goal is to place the special issue's contributions in context and highlight under-explored issues that future research could address.

This special issue *of Studies in Conflict & Terrorism* focuses on measurement issues in the study of terrorism, an important but understudied topic. Recently, scholarly interest in terrorism has increased and systematic methods are now more commonly used. Importantly though, terrorism works continue to lag behind related fields of study in the analysis of data and the adoption of sophisticated research methods.[1] The few terrorism works that do analyze data highlight substantive findings as opposed to measurement issues. A study's substantive findings are only meaningful though if it correctly addresses the measurement issues that invariably arise during the research process. In other words, while the quality of terrorism research has greatly improved in recent years, measurement issues have been under explored and researchers could do more in this area to further improve the field's rigor.

This special issue hopes to begin to fill this gap. The eight articles in this issue raise, discuss, and provide solutions for methodological issues that could make important contributions to the social scientific study of terrorism. We begin by outlining some general points about the relationship between the strengths and weaknesses of various measurement

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strategies and our understanding of terrorism. The goal is to place the special issue's contributions in context and highlight under-explored issues that future research could address.

Almost all discussions on measuring terrorism begin by noting the difficult conceptual and methodological issues that must be confronted. The definitional debate, of course, looms large.[2] There is no universally accepted terrorism definition by most countries, the United Nations, academics, or policymakers. Indeed, operational definitions even vary within different branches of the U.S. government. Scholars have empirically demonstrated that these definitions diverge on whether they include or exclude each of 22 distinct elements.[3] Examples of disagreement include whether the act must target civilians, be random, or intended to cause fear in the population. Nonetheless, currently almost all terrorism definitions require the act to be violent, ideologically motivated and committed by non-state actors.[4]

Historically, terrorism researchers rarely used statistical methods in their studies.[5] Silke's extensive review of research published in the major terrorism journals between 1995 and 2000,[6] and Lum, Kennedy, and Sherley's Campbell subsequent systematic review[7] of over 14,000 terrorism articles published between 1971 and 2003 both found that only three percent of studies employed statistical analyses. This was much lower compared to the related fields of forensic psychology and criminology. It could be that terrorism scholars have less access than criminologists and forensic psychologists to data sources that could be used for quantitative analyses.

Criminologists often use official data collected and maintained by the police and other government agencies. One prominent example of official crime data are the United States government's Federal Bureau of Investigation (FBI)'s Uniform Crime Reports (UCR). The UCR is a voluntary program that publishes a large number of crime statistics based on information submitted by local police agencies that originate from jurisdictions covering most of the U.S. population. Another data source widely used by criminologists is information obtained from crime victims. For instance, the Census Bureau collects and the Department of Justice administers the National Crime Victimization Survey (NCVS), a national household survey that asks respondents if they have been victimized by many of the same crimes tracked by the UCR. Both the UCR and the NCVS data are widely used by scholars to study the etiology of ordinary street crime.

LaFree and Dugan[8] and Dugan and Distler[9] point out, however, that it is difficult to rely on victim or police data to study terrorism. In many countries the rate of terrorism is low, and it would be difficult to create a nationally representative sample of terrorism victims. A strategy that relied on victimization data by definition would exclude the most severe terrorist acts (where victims perished). Another reason why terrorism researchers rarely focus on victims is because it is assumed that there is no variation to investigate. In other words, it is thought that terrorism victims are randomly selected.[10] Parkin, Freilich, and Chermak's preliminary examination, however, found that over 95 percent of the victims of far-right ideologically motivated homicide attacks in the United States were not randomly selected. Instead they were purposefully selected (such as the victims of assassinations) or selected because of what they represented (such as victims targeted because of their perceived racial, religious or other minority group membership).[11] Nonetheless, and perhaps not surprisingly then, few terrorism studies have used victimization data.[12]

There are also difficulties in relying on the police for terrorism data. Some terrorism attacks may not be reported to the police or not recorded in their data systems because they fail to meet the inclusion criteria and are subsumed under another crime type. Relatedly,

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terrorist acts are not always prosecuted as terrorism but instead as ordinary crime.[13] The inherently political nature of terrorism may also influence government tracking of its occurrence. Some researchers are thus reticent to use police data. In addition, the government may be equally hesitant to share their terrorism data with academics for both political and national security reasons.

Terrorism researchers are therefore less likely than criminologists studying ordinary crime to use police or other government data. One noted exception is the important data collection effort conducted by Brent Smith and his colleagues for the American Terrorism Study (ATS).[14] The ATS has been conducted in cooperation with the FBI's Terrorist Research and Analytical Center, and includes persons indicted federally as a result of investigations under the FBI's Counterterrorism Program. Smith and colleagues were provided lists of individuals indicted for terrorist offenses, and they then traveled to federal courthouses to collect data from trial transcripts and docket information. Smith and colleagues have used these data to answer important questions, including the effects of political motive on sentencing outcomes,[15] profiles of American terrorists,[16] and prosecutorial strategies in terrorism cases.[17]

Other scholars have also managed to overcome obstacles and obtain terrorism data from official sources including the police or military.[18] Two studies in this special issue follow in this tradition by obtaining terrorism data from the police to engage important methodological issues. Behlendorf, Belur, and Kumar use data from the Andhra Pradesh Police, a state in India to make a comparison to three media-based datasets that also tracked terrorism incidents in this state. Similarly, De Bie and De Poot obtained unique Dutch data that included police and court files containing wiretaps of both telephone and Internet communications, recordings of in-house communication, transcripts of suspect interrogations, witness statements, observation reports, forensic reports, reports of house searches, and expert-witness reports. Unlike Behlendorf and colleagues who employed quantitative methods, De Bie and De Poot used their exceedingly rich official data to illustrate how grounded theory-based qualitative methods can be used for analysis. Their goal was to develop inductively new theories of terrorist etiology.

Another major strategy criminologists employ to measure regular crime is obtaining information from the offenders themselves through interviews. This approach is referred to by criminologists as "self-reports." Criminologists have analyzed self-report data both quantitatively and qualitatively. In fact, some classic criminological research hails from the genre of qualitative self-report studies.[19] There are also large scale criminology and delinquency data collection efforts that interview youths to collect information to code attributes about both the offenders and the crimes they commit.[20] Sometimes these efforts focus on the same type of crimes tracked by the UCR and the NCVS. Many criminology studies currently appearing in leading journals use quantitative self-report data.[21] The quantitative self-reports often only ask about specific offending patterns for a distinct period (such as six months or a year) to minimize telescoping (incorrectly including or excluding into the reference period asked about).

Because the use of official and victimization data by terrorism scholars is limited due to the obstacles outlined above, many terrorism scholars have embraced the self-report strategy. Silke's review demonstrated that the interview method is one of the more popular data sources and methods employed by terrorism researchers.[22] Despite the common refrain that it is difficult to talk to terrorists due to safety and access issues, scholars have actually

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interviewed (former and current) terrorists from almost every continent and extremist ideological belief system.[23] Silke concluded that the interview method is flexible and it provides researchers a measure of control.[24]

However, Silke also noted that the interview method potentially suffers from weaknesses. Limitations include gaining access to terrorists, its expense, interviewer bias, generalizability, opportunity sampling, and interviewer effects. Importantly, most terrorism interviews are retrospective that raises the possibility that they suffer from retrospective construction; the human tendency to construct specific moments as significant in retrospect.

Criminologists have responded to these measurement challenges in a variety of ways. For example, some have oversampled youths from high crime areas to address low base rates, and sampling issues. Others have used longitudinal designs, bounded responses by conducting repeat interviews and minimized retrospective construction by focusing on short reference periods.[25]

Most terrorism studies that employ the interview method, however, fail to note systematically these methodological challenges and rarely explain what steps, if any, were taken to overcome them. In addition, most interview studies provide little detail on such potentially important issues as the interview setting, or the specific nature of the interview protocols used.[26] Harris, Simi, and Ligon's contribution to this special issue engages these potential limits of surveys by investigating the methodological transparency of the interview method in terrorism research. They note that an increasing number of terrorism journal articles use the interview method. Harris and colleagues content analyzed 48 articles involving such interviews, and conclude that methodological transparency in these studies is often lacking. The authors then provide recommendations to enhance methodological transparency.

One of the major reasons for the increased use of statistical analysis in terrorism studies has been the creation and increasing availability of terrorism event, offender, and organizational-level databases. For example, the Global Terrorism Database (GTD),[27] International Terrorism: Attributes of Terrorist Events (ITERATE) database,[28] the Minorities at Risk Organizational Behavior (MAROB) dataset,[29] and the United States Extremist Crime Database (ECDB),[30] have all been used to conduct quantitative terrorism studies to investigate important theoretical and policy relevant issues. All these databases were built by using open sources.[31]

The creation and growth of the Internet has made it easier for scholars to rely upon open sources to track systematically various terrorism attributes. Chermak and colleagues explain that open-source data refer to information that is open to public.[32] Often this information is available electronically and online. Open-source data have similarities with secondary analysis because much of it was not initially collected for research purposes. Examples of open-source information include media reports, books, some types of court records, watch-group materials, information produced by the extremist (or terrorist) group/movement, as well as other publicly available information.

Quantitative terrorism studies that rely on open sources also potentially suffer from methodological problems. For example, the failure of most studies to use non-terrorism or nonviolent control groups has hindered the advance of terrorism research.[33] It is not always clear though who should comprise the non-terrorist comparison group. The few prior studies that use comparison groups have relied upon a variety of strategies. Some, like Smith and Damphousse, and Gruenewald and Pridemore have used violent non-extremist regular offenders.[34] Others have employed nonviolent extremist offenders. Kerodal, Freilich, and Chermak's

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intriguing contribution to this special issue, for instance, examines both violent far-right extremists (akin to most terrorists) as well as far-rightists who only committed nonviolent financial crimes. Alternative strategies include comparing violent (terrorist) extremists to non-criminal extremists[35] or to the general population or the terrorists' reference group in the general population.[36] Other strategies are also possible such as disaggregating different categories of terrorists and comparing them to each other.[37]

Another measurement issue that open-source terrorism studies commonly face is source type reliability. Sometimes the materials found on a specific case include different types of sources (e.g., indictments versus news articles) that contain conflicting values for the same attribute. Such discrepancies call for ranking the different source types in terms of reliability to resolve these conflicts.[38] Ackerman and Pinson's impressive study in this special issue addresses the reliability and validity of the open sources used to create open-source databases. They developed a sample Source Evaluation Schema to operationalize measures of open-source event validity at the case, source and variable levels. Ackerman and Pinson conclude that explicitly including credibility and validity levels for open sources will provide greater flexibility in tailoring the inclusion of cases for researchers' specific analytical requirements. Similar to Harris and colleagues' conclusions regarding methodological transparency and the interview method, Ackerman and Pinson argue that facilitating more transparent analyses of the open-source databases by including such measures can result in more defensible conclusions. This is especially important in the highly charged political and security context of terrorism.

Relatedly, coder reliability issues always arise when evaluating open-source databases. Many of these databases are large-scale efforts that often use computer algorithms and multiple persons to identify and code incidents. Thus, tests of the interrater reliability of items included in these terrorism databases is an increasingly important issue that should be addressed.[39] It should be noted though, that unlike studies that rely upon static data, most terrorism databases are dynamic and are updating variables as new information emerges or to reflect changes that have occurred. While many open-source terrorism studies have not always discussed the issue of coder reliability, a few preliminary efforts have moved in this direction.

The ECDB's initial examination of coder reliability for certain situational attributes of homicide events found coder agreement of 90 percent and higher. The ECDB trains its coders, constantly compares coding across coders to identify any abnormalities, and uses a coder listserv to discuss complicated issues that arise. When ECDB coders diverged it was most often because one filled in an attribute while the other did not and left it as missing, as opposed to the two coders inputting conflicting values. Freilich and colleagues concluded that one coder had located a source that contained the necessary information, while the other coder did not. They therefore suggested that multiple coders should search and code each incident to insure that all relevant documents were located.[40]

The Profiles of Individual Radicalization in the United States (PIRUS) database includes over 120 variables on nearly 1,500 individuals who have radicalized in the United States.[41] PIRUS data are based on publicly available court documents, newspaper accounts, and published sources on individuals drawn generally from three ideological groups: far left, far right, and radical Islamic. The data include all individuals who have radicalized within the United States to the point of committing ideologically motivated illegal violent or nonviolent acts, joining a designated terrorist organization, or associating with an organization whose

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leader(s) has/have been indicted of an ideologically motivated violent offense. To check the reliability of the coding the researchers took a 10 percent random sample of cases, coded each case twice using separate individuals and used Krippendorff's alpha procedure to assess the reliability of the coding procedures.[42] But while we are beginning to see these kinds of coder reliability tests in the open-source literature on terrorism, it is still relatively uncommon.

Another open-source database issue relates to the missing values of variables. Some open-source databases have had great success in minimizing missing values. Parkin describes an innovative strategy, for example, that used highly targeted follow-up searches of public records to limit missing data on key variables to than 1 percent of the population. [43] He used sources like state, local, and federal inmate locators; online local court dockets; the social security death index; and online national record aggregators such as Ancestry.com, Archives.com, BeenVerified.com and other news aggregates to collect information on births, marriages, deaths, military service, address histories, relatives, associates, criminal histories, filed bankruptcies, and financial liens and judgments. All of this information is greatly useful in reducing missing information.

One fundamental point is whether an attribute (e.g., whether an offender had a criminal history) should be coded as "no" versus as "missing" if the open sources provide no information on it. Parkin and Freilich argue that in many of these cases if no information is found one way or the other on the attribute, the default coding should be "0" (for example, "no" criminal history) as opposed to missing. [44] They maintain that this is necessary when working with open-source materials where information may be left out because it is not considered relevant to the story. Parkin and Freilich state that most sources, especially media outlets, would have no reason to report a negative response (e.g., an offender was never arrested), but would be much more likely to report if the offender did have such an attribute. They also point out that if scholars disaggregate the open-source data they are using (such as categorizing all ECDB or GTD terrorist incidents as suicide attacks, or non-suicide attacks) then both categories would be identified, searched, and coded using the same methods. This includes the default strategy of coding cases with no information on an attribute as no, instead of missing. Thus, there is no reason to believe that the likelihood of missing data would systematically vary between these two groups (e.g., suicide versus non-suicide attacks) if the default strategy they suggest is used.

In a recent analysis of the PIRUS data, Jaśko, LaFree, and Kruglanski[45] used multiple imputation methods to replace missing data.[46] In this approach instead of filling in missing observations with one specific value, the researchers created 25 datasets with a range of values. Each imputed data set was then analyzed separately and the results of these separate analyses were pooled and averaged to obtain final coefficients. While promising this type of multiple imputation strategy is still rare in the analysis of open-source data on terrorism.

There have also been few open-source studies that have looked at selectivity bias or created error profiles (i.e., listing non-sampling errors that could occur in each step of the database's creation).[47] The article by Behlendorf, Belur, and Kumar responds to this important critique by comparing terrorist attacks derived from three open-source media-based datasets (including the GTD and two other sources) and official police records from Andhra Pradesh state in India. Behlendorf and colleagues find that the media-based datasets capture the geographic prevalence of terrorism yet severely underestimate the frequency of attacks, biasing toward lethal bombings. The authors conclude that existing terrorism databases include a

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select version of violence in these countries, discounting especially the prevalence and regularity of non-lethal violent activity.

Although, as noted, open-source databases include a variety of sources, the most common type relied on is media reports. Several years ago Chermak and Gruenewald investigated the media's portrayal of terrorism inside the United States.[48] Parkin and Green's intriguing contribution to the current issue follows in this tradition. They highlight the most efficient methodology for sampling from a population of *New York Times* articles related to terrorism, which were generated through keyword searching. Efficiency was based on which sample statistic was closest to the population parameters of interest. The smallest sample size, where 68 percent of the sample statistics were within one standard deviation of the population mean and 95 percent of the sample statistics were within two standard deviations of the population mean, were identified as the most efficient. They also determine whether the frequency of news articles is correlated with the temporal distribution of terrorist attacks found in the GTD to sample more efficiently from the population. Parkin and Green confirm prior research in that sampling efficiency is related to the weekly news cycle. But contrary to prior research, they also find that the sample must include between 20 to 29 constructed weeks to achieve representativeness of an entire year of coverage for a population generated through keyword searches. In addition, the study also finds that there is a limited relationship between the frequency of terrorist attacks and the amount of terrorism coverage in the news.

It is also important to note that open-source event databases have overwhelmingly treated terrorist attacks and those who perpetrate them as if they were binary variables: either present or absent. But of course there is often definitional overlap between terrorism and other forms of crime and political violence, including insurgency, conflict between rival groups, hate crime, and organized crime. Moreover, in some cases the available information is insufficient or conflicting. In response to these concerns, the GTD in recent years has added a filter called "doubt terrorism proper," which signifies that while the analysts' concerns are not sufficient to exclude the case, they have enough uncertainty about the case to single it out.[49]

Similarly, empirical studies commonly assume that terrorists all subscribe to the same ideological beliefs with the same intensity as others in their ideological group. Kerodal, Freilich, and Chermak's contribution to this special issue explores this possibility by asking whether certain types of far-right (FR) ideological beliefs are associated with different types of criminal behavior. They also investigate if the various indicators of FR ideology can be used to create a scalar measure of commitment to FR ideology. They used ECDB data to examine a sample of far-rightists who committed a financial crime or homicide in the United States. They found that conspiratorial, antigovernment and antitax beliefs were positively associated with risk of financial crimes, while xenophobic, survivalist, and antigun control beliefs were positively associated with risk of violent crimes. A factor analysis created a commitment to FR ideology scale and identified four sub-types of FR extremists: Conspiracy Theorist, Survivalist, Movement Participant, and Proud Far-Rightists. The authors found that these typologies were useful in predicting criminal behavior patterns of far-rightists.

Boyd's contribution to this issue extends the literature by using multilevel modeling to assess both country characteristics, and group traits on the rate of domestic attacks and the rate of attacks against foreign targets. Prior research has only analyzed how country characteristics affect the rate of terrorist violence and there is a growing literature on how group traits influence terrorist violence. Boyd uses data from the Big Allied and Dangerous (BAAD) dataset and the GTD, to model a cross-national sample of 224

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terrorist groups in relation to their countries of origin to assess rates of domestic attacks. In this cross-sectional study many of these terrorist groups target multiple foreign countries. Multiple membership random effects modeling is used to assess the impact of multiple countries targeted by a group. The results of the study show that multilevel modeling provides an improved statistical fit over more conventional methods and the modeling strategy used here provides an improved measurement for the data analyzing attacks targeting foreign countries.

This special issue's final contribution represents the terrorism field's growing methodological innovativeness in addressing important questions. Cohen examines Palestinian suicide attackers. Previous empirical studies focused on suicide terrorism have used media accounts, official data, interviews of failed suicide attackers, interviews of the handlers of suicide perpetrators, or examined the videos released by organizations after suicide attacks where attackers explain why they launched the strike.[50] Cohen's study introduces a novel data source and methodology to further engage this issue. He obtained Palestinian suicide bombers' personal farewell letters (which also serve as last wills) to their families and loved ones which allowed him to create a comprehensive corpus of suicide letters. To minimize bias, Cohen used a programmatic sequence of quantitative psycholinguistic procedures, in which every step informed the next one. His analysis of the cognitive content of the suicide bombers' letters allows him to examine general themes and also test specific hypotheses regarding the motives and concerns of the attackers.

Cohen's research builds on prior studies that have applied linguistic content analyses of materials written by terrorists to identify possible associations with real world terrorist attacks.[51] His results are consistent with theories of political violence that emphasize prosocial meaning making as a motivation for suicide terrorism, rather than antisocial sentiments such as hatred and revenge. Cohen's methods provide an important new tool for understanding individual motivations for suicide terrorism and for identifying those elements in the organization's ideology that were endorsed by the individual bombers. These fault lines could also have important implications for designing more effective countermessaging campaigns.

Terrorism researchers have noted for years that studies of terrorism have been slow to adopt the most recent methodological innovations. In this special issue we have attempted to address this criticism by providing a set of articles that extend the traditional methodological boundaries of terrorism research. Taken together, the eight articles in this special issue break important new methodological ground in the study of terrorism and we hope will encourage researchers to push boundaries even further in the years ahead.

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Notes

1. Andrew Silke, "Research on Terrorism: A Review of the Impact of 9/11 and the Global War on Terrorism," in H. Chen, E. Reid, J. Sinai, A. Silke, and B. Ganor, eds., *Terrorism Informatics: Knowledge Management and Data Mining for Homeland Security* (New York: Springer, 2008), pp. 27–50; but see also Andrew Silke and Jennifer Schmidt-Petersen, "The Golden Age? What the 100 Most Cited Articles in Terrorism Studies Tell Us," *Terrorism and Political Violence*. Advance online publication. doi: 10.1080/09546553.2015.1064397.
2. See for example, Martha Crenshaw, "The Causes of Terrorism," *Comparative Politics* 13(4) (1981), pp. 379–399; Bruce Hoffman, *Inside Terrorism* (New York: Columbia University Press, 2006).

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3. Alex Schmid and A. J. Jongman, *Political Terrorism: A New Guide to Actors, Authors, Concepts, Databases, Theories, and Literature* (Amsterdam: North-Holland, 1988); see also Leonard Weinberg, Ami Pedhazur, and Sivan Hirsch-Hoefler, "The Challenges of Conceptualizing Terrorism," *Terrorism and Political Violence* 16(4) (2004), pp. 777–794.
4. Joshua D. Freilich, Steven M. Chermak, and Joseph Simone, Jr., "Surveying American State Police agencies about Terrorism Threats, Terrorism Sources, and Terrorism Definitions," *Terrorism and Political Violence* 21(3) (2009), pp. 450–475.
5. Ariel Merari. "Academic Research and Government Policy on Terrorism," *Terrorism and Political Violence* 3(1) (1991), pp. 88–102.
6. Andrew Silke, "The Devil You Know: Continuing Problems with Research on Terrorism," *Terrorism and Political Violence* 13(4) (2001), pp. 1–14.
7. Cynthia Lum, Leslie W. Kennedy, and Alison J. Sherley, "Are Counterterrorism Strategies Effective? The Results of the Campbell Systematic Review on Counter-terrorism Evaluation Research," *Journal of Experimental Criminology* 2 (2006), pp. 489–516.
8. Gary LaFree and Laura Dugan, "How Does Studying Terrorism Compare to Studying Crime?," in Matthew Deflem, ed., *Terrorism and Counter-Terrorism: Criminological Perspectives* (New York: Elsevier, 2004), pp. 53–74.
9. Laura Dugan and Michael Distler, "Measuring Terrorism," in Gary LaFree and Joshua D. Freilich, eds., *Handbook on the Criminology of Terrorism* (Hoboken, NJ: Wiley-Blackwell, 2016), In press.
10. See for example, Kelly Damphousse, Brent L. Smith, and A. Sellers, "The Targets and Intended Victims of Terrorist Activities in the United States," in D. Das and P. Kratocski, eds., *Meeting the Challenges of Global Terrorism: Prevention, Control, and Recovery* (Lanham, MD: Lexington Books, 2003), pp. 171–188.
11. William S. Parkin, Joshua D. Freilich, and Steven M. Chermak. "Ideological Victimization: Homicides Perpetrated by Far-Right Extremists," *Homicide Studies* 19(3) (2015), pp. 211–236; see also Dafhna Canetti-Nisim, Gustavo Mesch, and Ami Pedahzur, "Victimization from Terrorist Attacks: Randomness or Routine Activities?" *Terrorism and Political Violence* 18(4) (2006), pp. 485–501.
12. See, for example, William S. Parkin, "Victimization Theories and Terrorism," in Gary LaFree and Joshua D. Freilich, eds., *Handbook on the Criminology of Terrorism* (Hoboken, NJ: Wiley-Blackwell, 2016), in press.
13. LaFree and Dugan, "How Does Studying Terrorism Compare to Studying Crime?"
14. See, for example, Brent L. Smith, *Terrorism in America: Pipe Bombs and Pipe Dreams* (New York: State University of New York Press, 1994); Brent L. Smith and Kelly R. Damphousse, "Terrorism, Politics and Punishment: A Test of Structural-Contextual Theory and the 'Liberation Hypothesis.'" *Criminology* 36(1) (1998), pp. 67–92.
15. Brent L. Smith and Kelly R. Damphousse, "Punishing Political Offenders: The Effect of Political Motive on Federal Sentencing Decisions," *Criminology* 34(3) (1996), pp. 289–321.
16. Brent L. Smith and Kathryn D. Morgan, "Terrorists Right and Left: Empirical Issues in Profiling American Terrorists," *Studies in Conflict and Terrorism* 17(1) (1994), pp. 39–57.
17. Brent L. Smith and Gregory Orvis, "America's Response to Terrorism: An Empirical Analysis of Federal Intervention Strategies during the 1980s," *Justice Quarterly* 10 (1993), pp. 661–681.
18. Examples of such studies include, Danielle M. Rusnak, Leslie W. Kennedy, Ibrahim S. Eldivan, and Joel M. Caplan, "Analyzing Terrorism Using Spatial Analysis Techniques: A Case Study of Turkish Cities," in Cynthia Lum and Leslie W. Kennedy, eds., *Evidence-Based Counterterrorism Policy* (New York: Springer, 2006), pp. 167–185; Michael Townsley, Shane D. Johnson, and Jerry H. Ratcliffe, "Space-Time Dynamics of Insurgent Activity in Iraq," *Security Journal* 21(3) (2008), pp. 139–146; Alex Braithwaite and Shane D. Johnson, "Space–Time Modeling of Insurgency and Counterinsurgency in Iraq," *Journal of Quantitative Criminology* 28(1) (2012), pp. 31–48; D. Kim Rossmo and Keith Harries, "The Geospatial Structure of Terrorist Cells," *Justice Quarterly* 28(2) (2011), pp. 221–248.
19. See, for example, Clifford R. Shaw, *The Jackroller: A Delinquent Boy's Own Story* (Chicago: University of Chicago Press, 1930).

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20. Terrence P. Thornberry and Marvin D. Krohn, eds., *Taking Stock of Delinquency: An Overview of Findings from Contemporary Longitudinal Studies* (New York: Kluwer Academic/Plenum Publishers, 2003).
21. The National Youth Survey and National Longitudinal Study of Adolescent to Adult Health (Add Health) are two examples of self-report data sources widely used by criminologists and that have produced a series of studies in the leading criminology outlets.
22. Silke, "The Devil You Know."
23. See, for example, James A. Aho, *The Politics of Righteousness: Idaho Christian Patriotism* (Seattle: University of Washington Press, 1990); Mark Juergensmeyer. *Terror in the Mind of God: The Global Rise of Religious Violence* (Berkeley: University of California Press, 2003); Jeffrey Kaplan. "Absolute Rescue: Absolutism, Defensive Action and the Resort to Force," in Michael Barkun, ed., *Millennialism and Violence* (London: Frank Cass & Co. Ltd, 1996), pp. 128–163; Alessandro Orsini, "A Day among Diehard Terrorists: The Psychological Costs of Doing Ethnographic Research," *Studies in Conflict and Terrorism* 36(4) (2013), pp. 337–351; Jerrold Post, Ehud Sprinzak, and Laurita Denny, "The Terrorists in Their Own Words: Interviews with 35 Incarcerated Middle Eastern Terrorists," *Terrorism and Political Violence* 15(1) (2003), pp. 171–184; Jessica Stern, *Terror in the Name of God: Why Religious Militants Kill* (New York: Ecco, 2003).
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25. Thornberry and Krohn, *Taking Stock of Delinquency*.
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