

The Theorizing of Terrorism Within Criminology

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Abstract

Objectives: While terrorism studies were once castigated as atheoretical and unempirical, criminology has been well suited to apply theories of crime to terrorism and to then test those theories with rigorous methods and robust data. The present study takes stock of how criminologists have theorized about terrorism and tested those theories over time in 13 of the discipline's leading journals. **Methods:** The study systematically examines theoretical framing, hypotheses, methodological approach, focus within criminology and criminal justice, and policy recommendations in terrorism-focused articles. **Results:** While terrorism has become more central within top journals, sparse attention has been paid to many criminological theories that could help us understand terrorism. Additional qualitative, theoretical, and mixed-methods research is needed. Further, few articles address the making of terrorism laws. We identify other systematic strengths and weaknesses across the literature and highlight domains for future research. **Conclusions:** Criminological research on terrorism has engaged theories within and beyond the discipline and employed a range

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of methodologies with diverse data sources to make contributions to both our broader field and to the larger body of scholarship on terrorism. Yet, many opportunities exist for criminologists to expand research on the making, breaking, and reaction to break laws regarding terrorism.

Keywords

terrorism, counterterrorism, theory testing, criminology, criminal justice

Introduction

Theory is essential to every scientific pursuit, as it is intrinsic to the scientific method itself (Kuhn 1962). All research is conducted “in the light of a pre-conceived theory” regardless of whether these ideas are stated or not (Popper 1970:52). Concordantly, theory is inescapable in scientific endeavors. When wielded well, theories enable prejudices and unquestioned assumptions to be identified, and—when possible—tested, which allows knowledge on a topic to overcome otherwise insurmountable barriers (Benton and Craib 2010). Terrorism is one intellectual domain where theory has played a key role in recent years (Fisher and Dugan 2019). Prior to the post-9/11 research boom, articles on terrorism had been derided as “fast-food”—“quick, cheap, ready-to-hand, and nutritionally dubious” (Silke 2001:12); and “almost all the research on terrorism could be broadly described as thought pieces, theoretical discussions, or opinions” (Lum, Kennedy, and Sherley 2006:492). Chief among these concerns were that prominent theories had not yet been used to understand terrorism (Black 2004; Rosenfeld 2004), which contributed to the longstanding observation that “even the most persuasive of statements about terrorism are not cast in the form of testable propositions” (Crenshaw 1981:380). Concordantly, while there has been a boom in terrorism research since 2001 across a range of social science disciplines (Heath-Kelly 2019; Young 2019), it is vital to examine the role that criminological theory has played in this expansion and whether that has resulted in other improvements in the approach taken in this research.

Given that terrorism is a crime (Clarke and Newman 2006; Freilich and LaFree 2015), it falls neatly within the purview of criminology’s mandate to understand the making of laws, the breaking of laws, and the reaction to the breaking of laws (Sutherland 1924). Criminology is not alone in its pursuit of examining terrorism. Political science (Asal, Naga, and Rethemeyer 2014; Chenoweth 2013; Crenshaw 2000; Hoffman 2002), psychology

(Kruglanski and Fishman 2006; Moskalenko and McCauley 2011; Victoroff 2005), economics (Benmelech, Berrebi, and Klor 2012; Blomberg, Hess, and Weerapana 2004; Sandler and Enders 2004), and more recently peace (Jackson 2000; Lopez 1995; Toros 2015) and security studies (Benson 2014; Dixit 2014; O'Rourke 2009), among others, also provide valuable insights to understand terrorism and responses to it. Criminology has however been credited with bringing its data collection procedures, analytic approaches, and empirically tested theories that have been developed over the past 250 years to understanding terrorism (Agnew 2010; Fisher and Dugan 2019; Haner and Sloan 2021; LaFree and Dugan 2015; LaFree 2021). Stemming from Beccaria's (1764a) seminal work for example, criminological studies have demonstrated that while counterterrorism strategies aimed at deterring terrorism may work under certain conditions (Carson 2014, 2017; LaFree, Dugan, and Korte 2009), strategies aimed at deterrence can also incite terrorist backlash increasing the number of attacks and fatalities (Argomaniz and Vidal-Diez 2015; Dugan and Chenoweth 2012; Fisher and Becker 2021; Hsu, Vasquez, and McDowall 2020). Criminological approaches to studying terrorism avoid many of the methodological pitfalls of previous terrorism research (Lum, Kennedy, and Sherley 2006). Further, criminology's contributions can be seen in contemporary research across a wide variety of disciplinary approaches currently employed to understand terrorism (see Altier and Thoroughgood 2014; LaFree and Miller 2008; Young 2019).

As with all scientific disciplines, theoretical development within criminology has not been linear. Instead of adhering to Popper's (1970) scientific principle of theoretical falsifiability, Bernard (1990) lamented that criminology had accumulated a wide array of theories of crime which almost all lacked both specific falsifiable hypotheses and testability in general. Dooley and Goodison (2020) further observed that some criminological theories are overused while others are largely ignored—and very few have been subjected to sustained critical analysis aimed at falsification. Of the criminological theories that have been examined, it has also long been noted that these theories do not explain individual differences well, as the majority of variation in criminal behavior remains unexplained (Weisburd and Piquero 2008). Compounded by the heavy reliance on a few large-scale and generalizable datasets within criminology (Sullivan and McGloin 2014), this has also reduced opportunities to competitively develop rival measurement approaches, replicate findings, and engage in theoretical competition. The reliance on existing criminological theories and datasets that support partial examinations of multiple theoretical perspectives has

decreased the practical burden on many criminological studies while exacerbating these issues (Pratt and Turanovic 2012). In other words, it may be easier to publish from the existing datasets using existing theoretical frameworks, but this is ultimately detrimental to triangulation and theoretical competition. Concordantly, there is still a need to adapt insights and approaches from other research domains, to triangulate resultant findings, and put creative effort into testing criminological theories in a falsifiable manner (Sullivan and McGloin 2014).

Not all criminological theories are well suited to explain terrorism, and additional theoretical work is still needed to properly engage numerous theories. At present, it is practically infeasible, for example, to assess self-control in children and examine its relationship to engaging in terrorism—a rare, political form of crime—later in the life. While nascent work applying this theory to terrorism has produced important insights using retrospective analyses within samples of previously radicalized individuals (Becker 2021), assessing whether early established self-control predicts participation in terrorism specifically requires further theoretical examination and large-scale data collection efforts. Nivette, Eisner, and Ribeaud's (2017) approach for initially testing the predictions of general strain theory on violent extremist attitudes holds promise but would still require long-term follow-up to assess the theoretically driven hypotheses more directly from either theory. Similarly, social disorganization theory argues that neighborhood-level social and cultural factors influence crime rates, yet at present, it is unclear whether this has any bearing on terrorism perpetration or target selection. Attempts to examine terrorism using social disorganization theories (see LaFree and Bersani 2014; Fahey and LaFree 2015; Akyuz and Armstrong 2011) have been criticized as the operationalization of key theoretical variables were unable to distinguish between key rival theories like opportunity theories (Morris, 2015) and as national-level operationalizations do not reflect the neighborhood-level variables essential to this theory (Fisher and Dugan 2019). Addressing these practical and theoretical challenges still requires great investment, however, this also provides opportunities for a better understanding of both terrorism and criminology theory and research.

Where criminological theories can be applied to terrorism, the shortcomings of these approaches still extend to terrorism research. This new domain, however, has also provided opportunities to address ongoing issues within criminological scholarship. Fisher and Dugan (2019) note that many theories have not yet been applied to study terrorism, although criminology was instrumental in dispelling intuitively popular—but ultimately false—explanations for terrorism such as personal narcissism and paranoia (see

also Sageman 2004). These insights have also borne benefits to the field of criminology as well. Similar to white-collar crime research's influence on the field in the twentieth century, terrorism research over the last two decades has enabled many of the assumptions about criminality more broadly to be examined (LaFree 2021). For example, criminologists studying terrorism have questioned broader links to socio-economic status, self-perceptions of criminality, and how generalizable findings are internationally (LaFree 2021). In doing so, the infrequency of terrorism incidence has also driven the development of rare event models and questioned whether the absence of terrorist attacks necessarily demonstrates successful prevention (Lynch 2011). Flowing into developing a criminological understanding of desistance (Dugan et al. 2008; Fisher 2021; Hasisi et al. 2020a; Hodwitz 2019; McCauley 2008; Miller 2016), the evaluation of criminal justice policy (Braithwaite 2005; LaFree and Hendrickson 2007; Zedner 2008), and crime prevention initiatives (Björgo 2016; Freilich, Gruenewald, and Mandala 2019), there is evidence to support the claim that "mainstream criminology has been enriched by widening its scope to include political extremism" (LaFree 2021:1).

Several recent, cross-disciplinary studies have taken stock of the burgeoning terrorism literature, focusing on trends in the topics studied (Schuurman 2019), operationalization and measurement of terrorism (Young 2019), and authorship, data, and methods (Schuurman 2018) used. The systematic approaches employed in these studies have clarified the extent of the strengths noted above and have also identified conceptual gaps and persistent deficiencies in the literature. Beyond identifying trends, these studies have also defined key domains that should be explored in future research.

Heeding these disciplinary advances and shortcomings, the present study systematically examined the use of theory within 13 leading criminology and criminal justice journals from their inception dates until 2019. Seeking to identify prominently studied and ignored theories alike, this study also measured whether each theory fell under the umbrella of criminology and/or criminal justice, and whether the making, breaking, or reaction to the breaking of laws was given consideration in each article. Noting that theory is just one element required for high-quality scientific research, this study also documented the use of expected structural elements including the inclusion of hypotheses, the methodological approaches used, and whether policy recommendations were made. Results show that some criminological theories have dominated the existing literature while other promising and prominent theories remain relatively unused. This study

also identified that while clear methodologies are often used, most studies do not test hypotheses—indicating important room for structural improvement. Findings do however demonstrate that the quality of criminological research on terrorism has increased in recent years, with all the measured metrics indicating meaningful improvements since Lum, Kennedy, and Sherley's (2006) systematic analysis.

Theory, Criminology, and Terrorism

After years of relative inattention, terrorism became a hotly politicized and debated domain in the early twenty-first century (Heath-Kelly 2019; Young 2019). A dearth of evaluation research of counterterrorism efforts (Lum, Kennedy, and Sherley 2006) coupled with more than 80 percent of articles being written by one-time only authors of terrorism-focused research (Silke 2001) led to intuitively appealing—yet scientifically unsupported—theories of terrorism rooted in narcissism, paranoia, and other psychological pathologies gaining relative theoretical and social prominence (Sageman 2004; Victoroff 2005). Greater scrutiny following 9/11 demonstrated the clear need for better terrorism research, which was supported by increased government financial support and more sustained academic attention (Silke 2004). The catalytic nature of 9/11 and focused societal attention on Islamist extremist terrorism (Kearns, Betus, and Lemieux 2019) however shaped this subsequent development. Indeed, a high proportion of articles published in terrorism journals from 2007 to 2016 focused on Al Qaeda and Salafist jihadi extremism more broadly (Schuurman 2019). Despite this ideological focus, Schuurman (2020) and Young (2019) indicated that the increased scholarly attention had been accompanied by more consistent use of primary data and more advanced analytic techniques in security-focused political science journals. Across these three studies however, the need to broaden the research foci of the field was still observed (Schuurman 2019; Young 2019), along with now persistent finding that most authors of included papers were one-time contributors to this literature (Schuurman 2020).

Criminology's theoretical traditions are well suited for examining a rapidly developing and politicized subject area. Criminology has produced a range of major theoretical traditions that have increasingly influenced a broad range of policy domains (Sampson, Winship, and Knight 2013), and helped develop a more accurate understanding of traditional and emerging crime trends (Benson 2021). Since Beccaria's work, criminological research has helped to better articulate the rationale (or lack thereof) behind criminal justice responses (Beccaria 1764a) and understanding the

motivations of those who break the law (Beccaria 1764b). These theoretical works and the ensuing empirical research (see Nagin 1998, 2013) were also instrumental in dispelling erroneous—yet politically prominent—ideas surrounding crime (Rafter 2005). Evidenced more recently through examinations into white-collar crime (Benson 2021; Simpson 2013, 2019) and cybercrime (Holt and Bossler 2014; Jaishankar 2018), criminological theories have been central to both establishing baseline knowledge on emerging crime types and designing prevention and harm reduction methods (Hirschi and Gottfredson 1987; Langton and Piquero 2007; Leukfeldt and Yar 2016; Wilson et al. 2015; Yar 2005). Considering terrorism's contested identity (Ganor 2002; Weinberg, Pedahzur, and Hirsch-Hoefler 2004), criminology's theoretical and empirical history positions it as a key discipline for understanding the nature of terrorism, why it is committed, and how to prevent or reduce this form of crime.

Another of criminology's disciplinary strengths comes from the variation in theoretical assumptions about the nature of humanity and the origin of crime (Einstadter and Henry 2006; Walsh 2004). Competition between theories has led to several influential debates that have advanced the theories being discussed in the present study—and the field of criminology in general (Laub and Sampson 1991). Beyond the Sutherland-Glueck debate, key disputes across and within social disorganization (Bursik 1988; Kornhauser 1978), control theory (Hirschi and Gottfredson 2000; Laub and Sampson 1993; Taylor 2001), strain theory (Agnew 1985; Chamlin and Cochran 2007; Messner and Rosenfeld 1994), and labeling theory (see Paternoster and Iovanni 1989; Wellford 1975)—to name a few—have helped define existing theories and driven future generations of empirical work. While this theoretical examination has not been extended to all perspectives—and this process has not lived up to the ideals of Popperian or Kuhnian scientific progress (Dooley and Goodison 2020)—this disciplinary experience provides both a wealth of empirically clarified perspectives to test and generations of analytic and methodological experience to draw upon to understand terrorism. Concordantly, while terrorism is a crime (Clarke and Newman 2006; Freilich and LaFree 2015) and falls squarely within Sutherland's (1924) boundaries for criminology, the discipline's experience with emerging, highly political domains coupled with the wealth of theoretical developments place criminology in a robust position to yield insights into terrorism studies more broadly.

Criminological Structural Advances and Terrorism

Compared to political science, criminology was a latecomer to terrorism research (Fisher and Dugan 2019). As such, while Silke (2001) noted that

terrorism articles in criminological journals demonstrated a greater empirical commitment than those in terrorism journals, the potential influence of these articles was diminished due to their lower prevalence. The theoretical scope of early terrorism research was also limited (Black 2004; Rosenfeld 2004), which left opportunities for criminologists to address important gaps in the literature. While scholars have pointed to growth in this body of work in recent years (see Fisher and Dugan 2019; Fisher 2021; LaFree 2021), the low historical baseline makes this claim easy to tender and limits its meaning. Especially considering that some theoretical tests have been unable to distinguish between rival criminological theories (Morris 2015), the attention given to social disorganization theory within terrorism for example (Akyuz and Armstrong 2011; LaFree and Bersani 2014; Fahey and LaFree 2015) has been sparse in comparison to its application to other crime types. This does not diminish the importance of major structural advances that have been achieved through the production of datasets (LaFree and Dugan 2007; Smith and Damphousse 2009), and the introduction of new analytic techniques (Dugan and Yang 2012; Morris and Slocum 2012; Corner and Gill 2020). In concert, these advances have provided opportunities to better understand terrorism and overcome the non-empirical approaches that previously dominated this domain.

As a politically contentious topic, studying terrorism comes with a slew of conceptual, methodological, and theoretical challenges. It has oft been lamented that there will never be a consensus definition of terrorism (see Schmid 2011), and the term terrorism is regularly misused and misapplied (Betus, Kearns, and Lemieux 2021; Huff and Kertzer 2018). While discussions of rival definitions can be useful for refining a concept (Goertz 2006), this presents difficulties for the creation of datasets and the publication process alike. While countries and agencies within countries may define terrorism for their own political ends (Chomsky 2007; Tilly 2004), providing a robust and scientific definition that is not dependent on political conditions is vital for producing scientific knowledge (Gottfredson and Hirschi 1987). Sensitivity tests can be used to examine whether variations in definitions impact the substantive findings of any analysis, though this presents additional research hurdles including the potential for large-scale empirical endeavors to be dismissed out of hand (Forst 2017). This has been a feature of recent studies of terrorism within criminological journals that have assessed sensitivity to temporal periods (Behlendorf, LaFree, and Legault 2012; Carson, Dierenfeldt, and Fisher 2022), international contexts (LaFree, Morris, and Dugan 2010; Fisher and Becker 2021; Fisher and Dugan 2021), subnational contexts (LaFree, Dugan, and Xie 2012;

Varaine 2020; Fisher and Lee 2019), measurement strategies and datasets (Chermak et al. 2012), and replication of treatment (Carson 2014, 2017). Despite these efforts, these concerns are compounded by the covert nature of both terrorism and responses to terrorism alike. Although some acts of terrorism are observed globally and the precursor acts can be pieced together, some acts of terrorism receive much less attention in part because they are neither claimed by nor attributed to a group (Kearns 2021) while others might never be publicly observable (Cubukcu and Forst 2018).

Criminology and terrorism studies both confront a host of related, though distinct data quality and measurement challenges where lessons from one could be brought to bear on approaches to the other. For decades, many criminological theories have been developed and tested theories using survey data with young respondents' self-reports about their deviant or criminal behaviors. Though terrorism itself is a low base rate event, there are other outcomes including support for violent extremism (Nivette, Eisner, and Ribeaud 2017) or violent extremist intentions (Rottweiler, Gill, and Bouhana 2020) that scholars have measured to test criminological theories.

Criminological theories that rely on crime rates must contend with the issues stemming from official crime data. In the United States, these data come from the Uniform Crime Report (UCR) which is rife with issues. To name a few, the UCR only includes crimes that were reported to police, there is not a consistent way that offenses are categorized across agencies, and the UCR relies on departments to submit their data to the FBI yet only about half of the country's agencies did so in 2021 (Berg and Lauritsen 2016; Digard and Kang-Brown 2022). Comparative criminological research is further complicated by both variations in how crimes are defined by country and challenges with finding reliable cross-national crime data. Terrorism research, in contrast, cannot rely on official data as it does not exist in the same way. Rather, the Global Terrorism Database—a systematically collected, publicly available event-level dataset—has allowed scholars to publish high-quality empirical research on both domestic and international terrorism in a way that is challenging with more common crimes outside of homicide (LaFree 2005). Interestingly, while crime is almost always measured as a rate, terrorism is almost always measured as a count. Exploring the implications of this, Young and Kearns (2017) did the following: (1) took both LaFree and Tseloni's (2006) cross-national models of homicide and Sambanis' (2008) cross-national model of terrorism, (2) replicated LaFree and Tseloni's models on terrorism data and Sambanis' model on homicide data, and (3) examined how changing the

unit of measurement between count and rate for both terrorism and homicide influences results. While Sambanis' (2008) model of terrorism was a strong predictor of both forms of violence regardless of how they were measured, LaFree and Tseloni's (2006) model of homicide was far less consistent. Taken together, this reveals that direct comparisons and inferences between studies on terrorism and the broader criminological literature are still problematic due to these long-standing data and measurement challenges.

Criminology's experience with unpacking the "dark figure of crime" is especially useful for addressing and couching limitations within the terrorism literature (Biderman and Reiss 1967). However, systematic attrition due to geographic, political, and linguistic methodological hurdles that make publishing terrorism-focused studies in the discipline's flagship journals difficult. Given that many criminological theories are based on one's perception of costs and benefits (Baker and Piquero 2010; Paternoster and Simpson 1996), stressors and strains (Broidy 2001), and internal and social controlling influences (Matsueda and Heimer 1987; Sellers 1999), these methodological challenges make it difficult to test theoretical mechanisms as well. Thus, some key empirical tests are unable to differentiate between rival theories—social disorganization and rational choice, for example—as findings may be consistent with both perspectives (Morris 2015), and claims that existing data and methodological constraints make theories like general strain theory currently untestable (Agnew 2010). Further, terrorism is a rare event that violates many statistical assumptions (Drakos and Gofas 2006) and must be contextualized within historical and sociopolitical contexts (Dugan and Chenoweth 2012). As such, testing any criminological theory's value for explaining terrorism is replete with difficulties.

Despite these challenges, several important criminological studies have provided insight into the nature of terrorism. Leveraging the datasets and analytic techniques previously discussed, criminologists have investigated factors that influence the incidence of terrorism (Dugan, LaFree, and Piquero 2005; Miller 2012), the lethality of terrorism (Carson and Suppenback 2018), the geographic distribution of terrorism (Hasisi et al. 2020b; LaFree et al. 2012), the impact of counterterrorism efforts (Carson 2019; LaFree, Dugan, and Korte 2009), trajectories of terrorism (Behlendorf et al. 2012; LaFree et al. 2010), precursor terrorism actions (Corner and Gill 2020; Freilich et al. 2015), and the motivations behind terrorism (Simi, Sporer, and Bubolz 2016; Klein, Gruenewald, and Smith 2017). These studies demonstrate the value that criminology brings to

terrorism studies, however important theoretical and empirical gaps persist within this literature. Concordantly, it is essential to examine the extent and role that theory has played in driving terrorism research, highlight the strengths of the current literature, and identify important theoretical gaps that remain.

Present Study

This study documents the prevalence of articles on terrorism within 13 leading criminological journals. Specifically, this article examines the use of theory within articles on terrorism published in 13 of the leading criminology and criminal justice journals from their relative inception dates until 2019. Greater political and social interest in terrorism coupled with the proliferation of datasets and techniques for studying terrorism noted should increase the prevalence of articles on terrorism in criminological journals in recent years. In addition to recording whether an explicit theory was used in each article, this study also measured whether each theory fell under the umbrella of criminology and/or criminal justice. This study also examined: the structural elements of these articles to document the inclusion of hypotheses, the methodological approaches used, whether the making, breaking, or reaction to the breaking of laws was given consideration in each article, and whether policy recommendations were made.

Methods

Sampling Frame and Data

The first step was to identify a selection of prominent and widely cited criminology and criminal justice journals. We used Nix et al.'s (2019) sampling frame for generalist criminology and criminal justice journals to select eight initial journals: *British Journal of Criminology*, *Crime & Delinquency*, *Criminal Justice and Behavior*, *Criminology*, *Journal of Criminal Justice*, *Journal of Research in Crime and Delinquency*, *Journal of Quantitative Criminology*, and *Justice Quarterly*. We further include three prominent generalist journals: *Annual Review of Criminology*, *Criminology*, and *Public Policy*, and *Journal of Experimental Criminology*. Given the theoretical focus of this project, we also included the *European Journal of Criminology* and *Theoretical Criminology* for a total of 13 journals.¹

To compile the initial sample, we searched each journal from its inception through the end of 2019 for any article that met our broad inclusion

criteria where the word “terrorism” was present anywhere within the manuscript. This yielded a total of 1,419 articles that met our first-stage inclusion criteria. We then removed introductions to special issues, book reviews, and policy essays to isolate the empirical and theoretical literature on terrorism. Finally, to systematically focus on articles that were specifically about terrorism, we narrowed down the scope to only include articles where the title, the abstract, or the keywords included any of the following words or phrases: *terrorism*, *extremist crime*, *political violence*, or *ideologically motivated attack*. Both authors reviewed each article to ensure that we included all articles that met these criteria and excluded all articles that did not. This yielded an analytic sample of 144 articles or 10.15 percent of the articles that mentioned “terrorism.” Table 1 lists the 13 journals, the year each was first published, and descriptive information about the articles that met our broad inclusion criteria and those that were included in the final sample. See Supplemental Appendix Table A1 for the full list of articles.

While nine of the 13 journals were established before 2001, articles in our analytical sample were overwhelmingly (95.83 percent) published after 2001. As found in other disciplines (Phillips 2021; Young 2019), there has also been a marked increase in criminological research on terrorism since 9/11. Figure 1 shows the number of articles published each year. Spikes largely correspond with special issues on terrorism being published that year: 2009 and 2010 in *British Journal of Criminology*, 2009 in *Criminal Justice and Behavior*, 2012 in *Crime & Delinquency*, 2012 and 2019 in *Journal of Quantitative Criminology*, and 2019 in *European Journal of Criminology*.

Coding Procedure

We developed a coding protocol for variables focused on the article’s theoretical framing, hypotheses, methodological approach, focus within criminology and criminal justice, and policy recommendations. Both authors separately coded each variable across all articles and compared these initial codes. Cohen’s kappa coefficient for the initial coding showed substantial agreement ($\kappa = 0.76$) and was above the common threshold of 0.7 (Landis and Koch 1977). To increase confidence in our coding, we discussed all coding discrepancies, and consensus on the final code for each data point was achieved.

Variables

Theoretical Framing. Our main focus was on the theoretical framing of terrorism-focused articles in criminology and criminal justice journals. We

Table 1. List of Journal and Articles Included at Each Stage of Coding.

	First Year of Publication	# of Articles with Broad Inclusion Criteria Met	% from Broad Inclusion Criteria in Final Sample	# of Articles in Final Sample	% of the Final Sample
<i>Annual Review of Criminology</i>	2018	10	20.00%	2	1.39%
<i>British Journal of Criminology</i>	1961	527	5.31%	28	19.44%
<i>Crime & Delinquency</i>	1955	83	15.66%	13	9.03%
<i>Criminal Justice and Behavior</i>	1974	40	15.00%	6	4.17%
<i>Criminology</i>	1963	69	7.25%	5	3.47%
<i>Criminology and Public Policy</i>	2001	112	9.82%	11	7.64%
<i>European Journal of Criminology</i>	2004	95	16.84%	16	11.11%
<i>Journal of Criminal Justice</i>	1973	107	6.54%	7	4.86%
<i>Journal of Experimental Criminology</i>	2005	26	7.69%	2	1.39%
<i>Journal of Quantitative Criminology</i>	1985	31	74.19%	23	15.97%
<i>Journal of Research in Crime and Delinquency</i>	1964	25	16.00%	4	2.78%
<i>Justice Quarterly</i>	1984	99	16.16%	16	11.11%
<i>Theoretical Criminology</i>	1997	195	5.64%	11	7.64%
Total Articles		1,419	10.15%	144	100%

first coded a binary variable *any theory* for whether there was any explicit theoretical framework in the study. We then recorded the names of the theory or theories used to frame each study. From this, we then coded

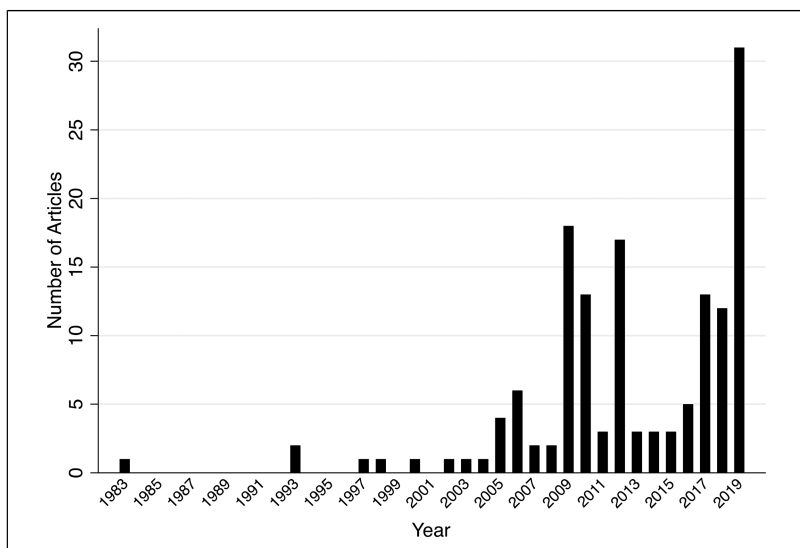


Figure 1. A number of terrorism articles published per the year from 1983 to 2019.

three other binary variables *criminology theory*, *criminal justice theory*, and *non-cj theory*—importantly these three binary variables were not mutually exclusive.

For the articles framed with criminology or criminal justice theory or theories ($N = 76$), we then created a series of variables to indicate the specific theories used. We coded a separate binary variable for each theory that appeared in at least two articles. For theories that appeared only once, we created a *criminology theory other* and a *criminal justice theory other* variable. Importantly, these variables are not mutually exclusive since articles can be framed using multiple theories.

Hypotheses. With the focus on theory, we were also interested in theory testing. To examine this, we coded a binary variable for whether each article had at least one explicitly stated hypothesis.

Methodological Approach. To better understand the methodological approaches common to criminological articles on terrorism, we coded three binary variables for *quantitative*, *qualitative*, and *theoretical* approaches to the topic. These approaches were not mutually exclusive, and we additionally created a variable to demarcate mixed-methods studies.

Criminological Domain. Following Sutherland's (1924) definition of criminology's scope as "the process of making of laws, of breaking of

laws, and the society's reaction towards the breaking of laws," we coded three binary variables—one for each of these three components of Sutherland's definition—for the focus of each article. Importantly, these three foci were also not mutually exclusive.

Policy Recommendations. Finally, we coded a binary variable for whether each article had explicit policy recommendations based on findings.

Findings

Theoretical Framing

Echoing Lum, Kennedy, and Sherley's observations (2006), a variety of theories were used to study terrorism across the 13 selected journals. As Figure 2 shows, articles on terrorism in criminology and criminal justice journals are framed in a few ways. Slightly under three quarters (73.61 percent; $n = 106$) of the 144 articles in our sample have a clear theoretical framework. The plurality of articles (39.59 percent; $n = 57$) are framed with criminology theory, while a far smaller proportion are framed with criminal justice theory (15.29 percent; $n = 22$). Interestingly, nearly one quarter (24.46 percent; $n = 34$) of the articles are framed with theories

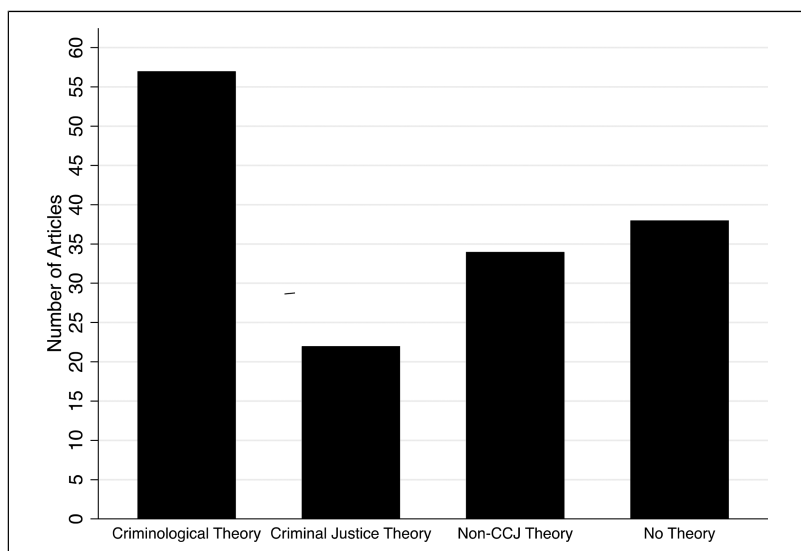


Figure 2. General theoretical framing in articles.

from outside of criminology and criminal justice—and only four of these 34 also include a theory from inside of the discipline. Note that 23 articles (15.97 percent) draw on two or more criminology or criminal justice theories, so the total count of these theories is greater than the number of articles with a criminology or criminal justice theoretical framework.

Focusing on within-discipline approaches, we next examine the articles that are framed with criminology or criminal justice theories. As Figure 3 shows, 13 criminology theories and three criminal justice theories were used to frame multiple articles in the sample. Choice-based and opportunity theories (rational choice, situational crime prevention, and routine activities) were the most prevalent frames from criminological theory, while theories of counterterrorism policing were most prevalent from criminal justice theory. Most of the 76 articles with either a criminology or criminal justice theoretical frame use one theory (72.37 percent; $n = 55$). Some articles used theoretical frames from two (21.06 percent; $n = 16$), three (3.95 percent; $n = 3$), four (1.32 percent; $n = 1$), and even five (1.32 percent; $n = 1$) different criminology or criminal justice theories. Further, three of the articles (3.95 percent) used both a criminology theory and a criminal justice theory. Surprisingly, less than one-third of the articles (31.94 percent; $N = 46$) had clearly stated hypotheses that were tested.

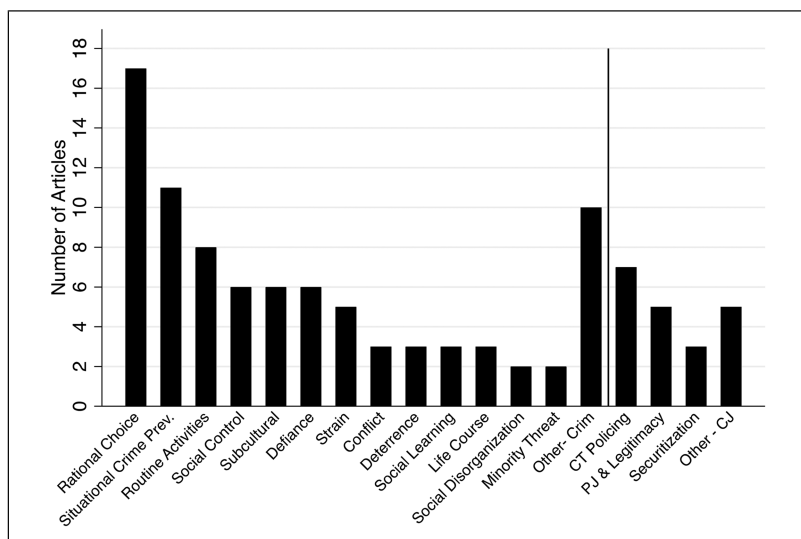


Figure 3. Criminology or criminal justice theories used to frame articles.

Methodological Approach

The vast majority (93.75 percent; $N = 135$) of the 144 articles in our sample have a clear methodology. As Figure 4 shows, most articles use quantitative methods only (57.64 percent; $n = 83$), followed by qualitative methods only (18.06 percent; $n = 26$), and theoretical arguments only (9.72 percent; $n = 14$). Only 9 percent of the articles use a mixed methods approach. Some combine quantitative and qualitative methods (4.35 percent; $n = 6$), while others use qualitative and theoretical methods (3.65 percent; $n = 5$).

Focus and Policy Recommendations

All the articles in our sample address at least one aspect of Sutherland’s (1924) definition of criminology as the study of (1) making laws, (2) breaking laws, and (3) the reaction to breaking laws. Most articles (60.42 percent; $n = 87$) address one of these criteria, while about a quarter address two criteria (27.78 percent; $n = 40$), and a few articles (11.81 percent; $n = 17$) address all three. As Figure 5 shows, studies of the breaking of laws are most prevalent followed closely by studies of the reaction to breaking laws and finally studies on the making of laws. Despite all the articles

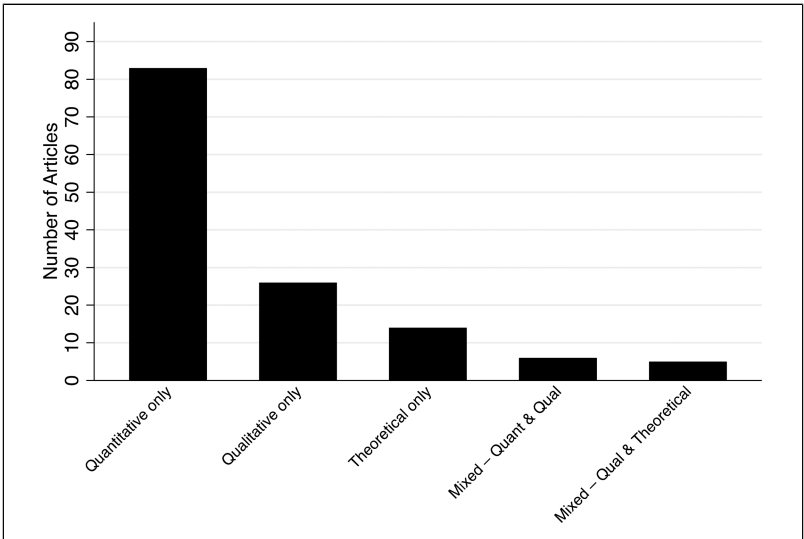


Figure 4. The methodological approach in articles.

addressing law making, law breaking, or the reaction to law breaking, just over half (61.71 percent; $N=89$) make clear policy recommendations. See Supplemental Appendix Table A2 for the summary of these statistics.

Trends Over Time

Lum and colleagues' critique of criminological research on terrorism's quality was published in 2006. Using this demarcation point, 19 (13.19 percent) of the articles in the present sample were published in 2006 or before while the remaining 125 (86.81 percent) were published between 2007 and 2019. We examine patterns in the existence of theory, hypotheses, methods, and policy recommendations in articles over time in two ways. Figures 6 and 7 present the total number of articles published each year alongside the number of those articles that contain each of the variables above. As is clear, few articles were published in some years, even post-2006, which makes count a better comparison than rate. However, comparing aggregate rates between the two time periods shows that criminological research on terrorism is increasingly likely to use theory (75.20 percent vs. 63.16 percent), test hypotheses (33.60 percent vs. 21.05 percent), use clear methods (94.40 percent vs. 89.47 percent), and offer explicit policy recommendations (64.80percent vs. 42.11 percent).

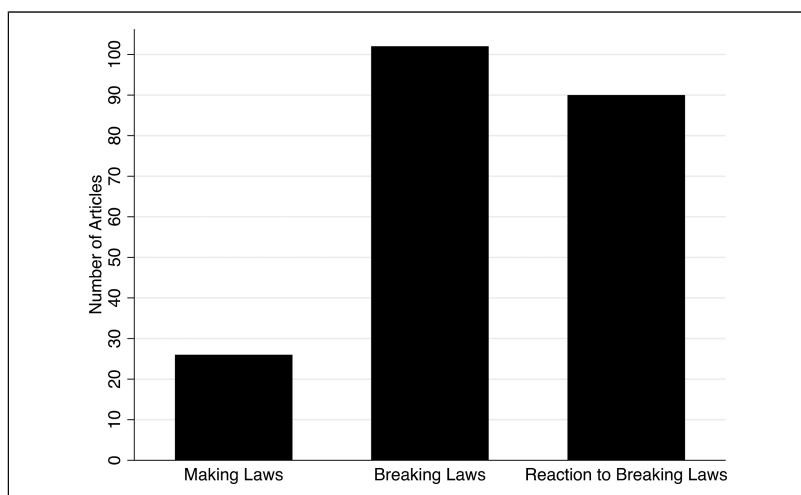


Figure 5. Focus within criminology.

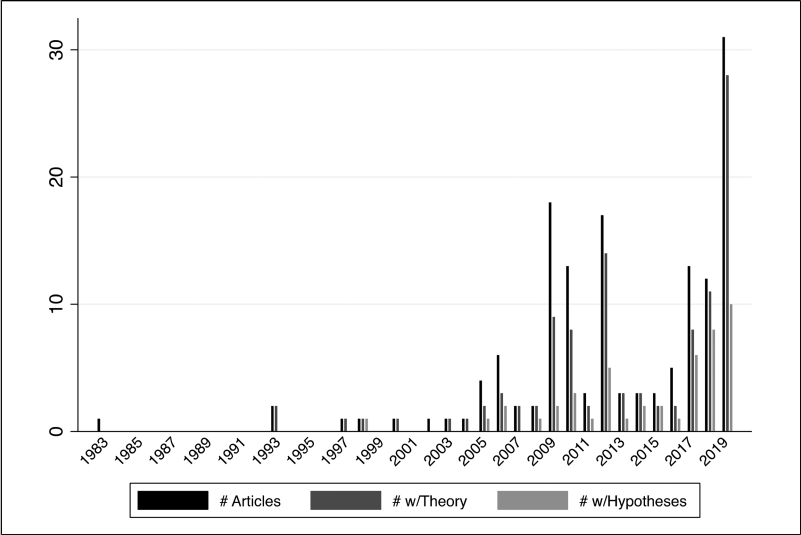


Figure 6. Prevalence of theoretical frameworks and hypotheses over time.

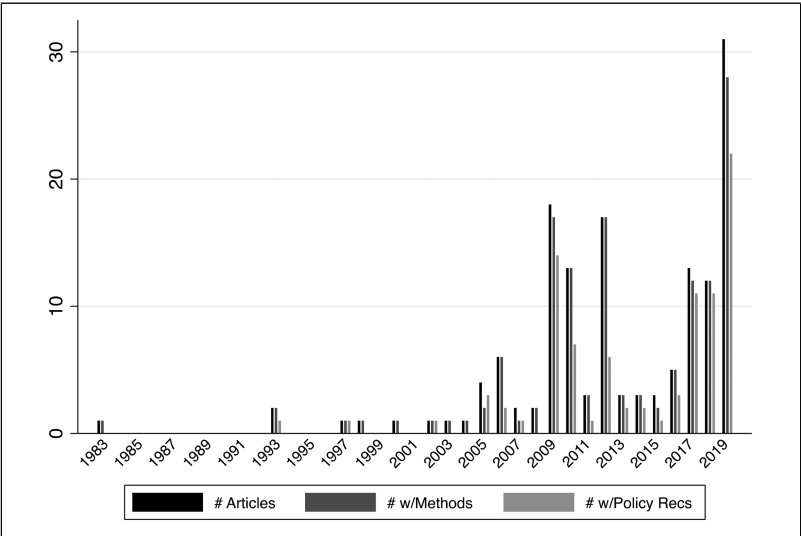


Figure 7. Prevalence of methods and policy recommendations over time.

Discussion

This study aimed to systematically examine the use of theory in articles on terrorism across 13 leading criminology and criminal justice journals from their inception dates through 2019. The study noted: (1) whether an explicit theoretical frame was used, (2) measured whether each theory would be categorized as criminology theory, criminal justice theory, or non-cj theory, and (3) recorded the theories themselves. Further, the study examined structural elements of the articles including the inclusion of clear hypotheses, the methodological approach(es) used, which element(s) of Sutherland's definition of criminology the article addresses, and whether policy recommendations were made.

As expected, increased political and social focus on terrorism coupled with better data, funding, and methods to study it did increase the volume of terrorism-focused articles published in leading criminology and criminal justice journals in recent years. However, about a third of the articles in our sample were found in journal special issues, which highlights the ongoing challenges to publish terrorism-focused research in the discipline's main journals outside of these specific situations. Yet, terrorism is clearly a crime (Clarke and Newman 2006; Freilich and LaFree 2015) and every article in our sample falls within Sutherland's (1924) boundaries for criminology as the study of law making, law breaking, and the reaction to law breaking—in fact over a quarter of the articles addressed two of these components and nearly 12 percent addressed all three. Further, while additional focus on terrorism has largely improved the quality of research in this area, nearly 90 percent of articles in the initial sample that mentioned terrorism somewhere in them but did not actually focus on the subject suggests that the subject is often included as an anecdote even when not germane to the subject.

Theory is essential to scientific pursuit (Kuhn 1962), regardless of whether it is explicitly stated (Popper 1970). In the present study, slightly less than three-quarters of the articles had a clear theoretical framework, which suggests that some of the limitations Silke (2001) and Lum et al. (2006) raised about terrorism research persist. Still, most articles do have clear theoretical framing—the plurality of which comes from criminology theory, followed by theory from outside of criminology and criminal justice, and then from criminal justice theory. Together, this shows that criminologists have been committed to both applying our own disciplines' theoretical frameworks to terrorism as well as drawing on theories from other fields—sometimes doing so in tandem or combining theories from

our discipline—to better understand the relationship at hand. While criminology is well suited to study terrorism in many of the ways discussed in this article, there are also limits to how some of the discipline's theories and data can be brought to bear on this type of offense. With this in mind, there is potential not just for the criminological study of terrorism but for criminology more broadly when scholars bring theories from other fields into our journals and blend them with our discipline's existing theoretical frameworks—which is a common feature of the work reviewed in this study.

Echoing Lum et al.'s (2006) observations, a variety of theories—13 from criminology and three from criminal justice—were used to study terrorism across the sample. Choice-based theories—rational choice, routine activities, and situational crime prevention—were the most prominent frames within the present study. Surprising, two other choice-based theories—deterrence and defiance—that have both played critical roles in the terrorism literature more broadly (Carson 2014, 2017; Dugan and Chenoweth 2012; Fisher and Becker 2021; Hsu et al. 2020; LaFree et al. 2009) have been relatively under-represented in criminological research on terrorism. Nearly two decades after Black (2004) and Rosenfeld (2004) noted that some prominent criminological theories had yet been applied to terrorism, there has been a movement to correct this—albeit there is still room to grow. For example, social control, subcultural, and strain theories are each applied to a handful of studies in our sample, which marks an improvement. Yet—at least in the discipline's leading journals—other prominent criminology perspectives including social learning, labeling, feminist, and life-course theories have still received sparse empirical attention. Still, other of our discipline's theories—such as self-control and social disorganization theory—may never be well suited to explain terrorism given their underlying propositions and assumption coupled with data limitations.

Despite the general focus on theory across our sample, less than a third of the articles had explicitly stated hypotheses that were tested. This is surprising given that nearly all the articles had a clear methodology, and most of the articles used quantitative analyses that should be conducive to hypothesis testing unless only presenting descriptive statistics. Though hypotheses would not be expected for all methodologies, over 40 percent of the sample had a clear theoretical framework and methodology that should yield hypotheses and yet do not explicitly state that hypotheses will be tested, which indicates an area for improvement in criminological research on terrorism. As criminological research on terrorism becomes more engrained within the larger field, scholars should increasingly test and

refine the disciplines theories while also developing new criminological theories of terrorism, much of which will necessitate explicit hypothesis testing.

Quantitative articles comprise most of our sample, which is likely a function of the increased availability of public datasets on terrorism in recent years. Encouragingly, solely qualitative and solely theoretical studies together make up only about a quarter of the criminological articles on terrorism. Rather than case studies or thought pieces that have been historically criticized (Silke 2001), these approaches tend to reflect new data (e.g., Simi et al.'s life-history interviews) or expanding criminological thought on the topic (e.g., Agnew's General Strain Theory of Terrorism) and are often less prevalent in other disciplines that study terrorism (see Schuurman 2020), which together reflect one of the contributions that criminology can make to the broader terrorism-studies literature. Relatively few articles in our sample use mixed methods, which is unsurprising given the challenges of publishing studies of this nature in a journal-length treatment, but also presents another opportunity to expand criminology's influence on the broader literature. Finally, though criminology is an applied discipline whose research influences policy (Sampson et al. 2013) and most of the articles in our sample had clear theoretical frameworks and methodologies, only about 60 percent of the articles included clear policy recommendations. This is perhaps most surprising given the post-9/11 boom of terrorism research where so much emphasis has been placed on making empirical evidence actionable for practitioners and policymakers alike.

Conclusions

The main limitation of this study is that it focused on terrorism research across 13 of the most prominent criminology and criminal justice journals. While publishing in top journals—such as these—within one's discipline is often critical for decisions relating to hiring, retention, tenure, and promotion in academia, criminologists who study terrorism often publish in other outlets as well. Criminology theory has made important contributions to the field that are published in many of the discipline's other journals (e.g., Akyuz and Armstrong 2011; Carson and Suppenback 2018; Cubukcu and Forst 2018; Freilich et al. 2019; Hsu et al. 2020) and in edited volumes (e.g., Haner and Sloan 2021; Dugan and Yang 2012; Fisher 2021; Fisher and Dugan 2019; LaFree and Dugan 2015; Lynch 2011). Further, criminology theory is prominently featured in terrorism-studies journals and journals from other disciplines (e.g., Dugan and Chenoweth 2012; Dugan et al. 2008; Hodwitz 2019; LaFree and Dugan 2007; LaFree and Miller 2008; Miller

2016). A 2015 Special Issue on *Terrorism and Political Violence* was even entitled “Criminological Theory and Terrorism.” Due to the heterogeneity of outlets that publish criminological research on terrorism, a systematic review of our discipline’s contributions to terrorism studies is beyond the scope of this project, though expanding this review in the future would be a worthwhile endeavor.

The regularity with which criminologists who study terrorism go beyond the discipline to publish research—despite terrorism being a crime and the study of it fitting clearly within Sutherland’s mandate of criminology—highlights the importance of bringing this body of scholarship into the mainstream of our field. As this study’s results demonstrate, criminological research on terrorism has engaged in a broader range of the discipline’s theories—though room certainly exists to expand further in this area—while also incorporating theories from other fields to expand the explanatory power of our research. Further, criminological studies of terrorism have employed a range of methodological approaches and data sources to make contributions to both our broader discipline and to the larger field of terrorism studies. The last few decades of criminological research on terrorism has proven Lum et al. (2006) correct in their assertion that criminological approaches to studying terrorism could avoid many of the methodological pitfalls that previous terrorism research suffered from. Though there are still many opportunities for criminologists to continue to contribute to research on the making of laws, breaking of laws, and reaction to breaking of laws related to terrorism.


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Supplemental Material

Supplemental material for this article is available online.

Note

1. Our focus on theorizing terrorism within criminology and criminal justice journals. As such, we include articles published in the 13 selected disciplinary journals—regardless of whether the author(s) hold a PhD in the field or work in one of its departments—since anything published in these journals falls within our domain. Criminologists regularly publish in terrorism research specialty journals. Though we considered including such articles, doing so would introduce a host of potential issues—the downsides of which outweigh the benefits in our view. Most notably, (1) there are numerous terrorism research specialty journals that criminologists publish in so it is not clear where to draw the line and (2) if we were to include terrorism research specialty journals, we would either (a) include all articles published or (b) only those published by criminologists—both of which would raise even more issues. If we were to (a) include all articles published in terrorism research specialty journals this would substantially muddle the paper since the majority of articles have nothing to do with criminology or criminal justice. If we were to (b) only include articles published by criminologists, this would both conflict with our current inclusion/exclusion criteria and be a challenge to identify since some prominent contributors to criminological research on terrorism neither hold a doctorate in the field nor work in one of the field's departments.

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