Introducing the Global Terrorism Database

GARY LAFREE AND LAURA DUGAN

National Consortium for the Study of Terrorism and Responses to Terrorism (START) and Department of Criminology and Criminal Justice, University of Maryland, College Park, Maryland, USA

Compared to most types of criminal violence, terrorism poses special data collection challenges. In response, there has been growing interest in open source terrorist event data bases. One of the major problems with these data bases in the past is that they have been limited to international events—those involving a national or group of nationals from one country attacking targets physically located in another country. Past research shows that domestic incidents greatly outnumber international incidents. In this paper we describe a previously unavailable open source data base that includes some 70,000 domestic and international incidents since 1970. We began the Global Terrorism Database (GTD) by computerizing data originally collected by the Pinkerton Global Intelligence Service (PGIS). Following computerization, our research team has been working for the past two years to validate and extend the data to real time. In this paper, we describe our data collection efforts, the strengths and weaknesses of open source data in general and the GTD in particular, and provide descriptive statistics on the contents of this new resource.
Compared to collecting data on other types of criminal violence, collecting data on terrorist violence is especially challenging. In criminology, data on illegal violence come traditionally from three sources, corresponding to the major social roles connected to criminal events: “official” data collected by legal agents, especially the police; “victimization” data collected from the general population of victims and non-victims; and “self-report” data collected from offenders. In the United States, the most widely used form of official crime data has long been the Federal Bureau of Investigation’s Uniform Crime Report. Major official sources of data on international crime include the International Criminal Police Organization (Interpol), the United Nations crime surveys, and for homicides only, the World Health Organization.

Since 1973, the major source of victimization data in the United States has been the National Crime Victimization Survey. For international data, the International Crime Victimization Survey has collected several waves of data from samples of individuals in several dozen nations around the world. Compared to the collection of victimization data in the United States, the collection of self-report survey data has been more sporadic. Nevertheless, several major large-scale national self-report surveys now exist. Similarly, several waves of international self-reported crime surveys have been undertaken. In general, data concerning terrorist events from these three sources are either entirely lacking or face important additional limitations.

Although government departments in some countries do collect official data on terrorism (e.g., the U.S. State Department), these data face at least two major difficulties. First, terrorism data collected by government entities are suspicious either because they are influenced by political considerations, or because many fear that they might be so influenced. Of course, to some extent, this is also a problem with official data on common crimes. Police, courts, and correctional officers frequently face political pressure to present their crime data in particular ways. However, owing to the fact that terrorism is a very public and political species of crime, any prevailing political pressure is likely to be especially acute with regard to terrorism.

Second, while huge amounts of detailed official data on common crimes are routinely produced by the various branches of the criminal justice system in most nations, this is rarely the case for terrorism. For example, most suspected terrorists in the United States are not legally processed for their acts of terrorism, but rather for other related offenses. It is true that this situation continues to evolve. For example, in the United States in 1995, Chapter 113B of the Federal Criminal Code and Rules added “Terrorism” as a separate offense and the Antiterrorism and Effective Death Penalty Act was signed into law in 1996. Among other things, the 1996 act attempts to cut fundraising by those affiliated with terrorist organizations, enhances the security measures employed by the aviation industry, and expands the reach of U.S. law enforcement over selected crimes committed abroad. Similarly, the U.S. Patriot Act, passed in 2001, strengthens criminal laws against terrorism by adding to the criminal code terrorist attacks against mass transportation systems, domestic terrorism, harboring or concealing terrorists, or providing material support to terrorists (115 Stat. 374, Public Law 107–56–October 26, 2001). Nevertheless, it still remains the case that most of those persons who are officially designated as terrorists in the annual reports produced by the FBI are either not prosecuted at all (e.g., the...
likely outcome for many of those detained at the U.S.’s Guantanamo Detention Facility) or are prosecuted under traditional criminal statutes. So, there is no easy way to gather official data on those arrested, prosecuted, or convicted of terrorist activities unless you do as Brent L. Smith and his colleagues have done, and assemble the data on a case by case basis. And of course the ability to use official data to study terrorism in most other nations is even more difficult. In particular, much terrorism data are collected by intelligence agencies that operate partially or entirely outside the realm of domestic criminal justice systems.

Victimization data, which have played an increasingly important role in the study of common crime in the U.S. and elsewhere, are almost entirely irrelevant to the study of terrorist activities. Several features of terrorism make it highly unlikely that victimization surveys will ever have widespread applicability. To begin with, despite the attention it gets in the global media, terrorism is much rarer than violent crime. This means that even with extremely large sample sizes, few individuals in most countries will have been victimized by terrorists. Moreover, because one of the hallmarks of terrorism is that victims are often chosen at random, victims of terrorist events are unlikely to know their perpetrator, making it difficult to produce details about the offenders. And finally, in many cases, victims of terrorism are killed by their attackers—a problem in criminology limited to the study of homicides.

Self-report data on terrorists has been more important than victimization data, but it too faces serious limitations. Most active terrorists are unwilling to participate in interviews, and even if willing to participate, gaining access to known terrorists for research purposes raises obvious challenges. As Ariel Merari has put it, “The clandestine nature of terrorist organizations and the ways and means by which intelligence can be obtained will rarely enable data collection which meets commonly accepted academic standards.” Still, we can learn a good deal from direct contact with terrorists or former terrorists. Examples include recent work by John Horgan based on interviews with terrorists, and by Clark McCauley based on examining notebooks and letters left behind by the 9/11 suicide bombers.

Because of the difficulties with the use of official, victimization, and self-report data in the case of terrorism, most research has been based instead on secondary data sources: the media (or media derived data bases), books, journals, or other published documents. A review by Andrew Silke concludes that nearly 80 percent of all published terrorism research is based on secondary data sources rather than on primary contact with suspected or actual terrorists, terrorist victims, or legal agents investigating terrorists. Most of the documents analyzed in these studies are based on unclassified open sources. Nevertheless, over time researchers have begun to use secondary sources to create increasingly comprehensive event data bases. In the next section, we briefly review these developments.

Terrorism Event Data Bases

The original data base used as the platform for the GTD, the Pinkerton Global Intelligence Services (PGIS) data base, is compared to seven other terrorism open source event data bases in Table 1. According to Table 1, the PGIS data have by far the largest number of events than any of the other data sets. Indeed, PGIS reports about seven times more events than the next three largest—ITERATE, the U.S. State Department, and Tweed. From 1970 to 1997, PGIS trained researchers to identify and record terrorism incidents from wire services (including Reuters and the Foreign
Broadcast Information Service [FBIS]), U.S. State Department reports, other U.S. and foreign government reporting, U.S. and foreign newspapers (including the New York Times, the British Financial Times, the Christian Science Monitor, the Washington Post, the Washington Times, and the Wall Street Journal), information provided by PGIS offices around the world, occasional inputs from such special interests as organized political opposition groups, and data furnished by PGIS clients and other individuals in both official and private capacities. As PGIS data collection efforts matured, their data collectors relied on a wider number of sources. For example, in the early 1970s, a large proportion of recorded PGIS sources are government reports and FBIS. But by the middle 1970s, data collectors were relying more extensively on a wider range of sources, especially national and international newspapers. In recent years, PGIS researchers increasingly relied on the Internet. Although the coding form went through three iterations, most of the items included were similar during the entire 28 years of data collection. About two dozen persons were responsible for coding information over the years spanned by the data collection, but only two individuals were in charge of supervising data collection during the entire period.13

PGIS defined terrorism as events involving “the threatened or actual use of illegal force and violence to attain a political, economic, religious or social goal through fear, coercion or intimidation.” Based on coding rules originally developed in 1970, the persons responsible for collecting the PGIS data excluded criminal acts that appeared to be devoid of any political or ideological motivation, and also acts arising from open combat between opposing armed forces, both regular and irregular. Data collectors also excluded actions taken by governments in the legitimate exercise of their authority, even when such actions were denounced by domestic and/or foreign critics as acts of “state terrorism.” However, they included violent acts that were not officially sanctioned by government, even in cases where many observers believed that the government was openly tolerating the violent actions. In sum, because the goal of the data collection was to provide risk assessment to corporate customers, the data base was designed to err on the side of inclusiveness. The justification was that being overly inclusive best served the interest of clients. An employee of a corporation about to move to Colombia would be concerned about acts of violence against civilians and foreigners, regardless of whether these acts were domestic rather than international, threatened rather than completed, or carried out for religious rather than political purposes.

Table 1. Major archival data bases on terrorist incident reports

<table>
<thead>
<tr>
<th>Author</th>
<th>Scope</th>
<th>Period</th>
<th>Number of incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGIS</td>
<td>Domestic &amp; International</td>
<td>1970–1997</td>
<td>67,179</td>
</tr>
<tr>
<td>ITERATE</td>
<td>International</td>
<td>1968–2000</td>
<td>10,837</td>
</tr>
<tr>
<td>TWEED (Europe)</td>
<td>Domestic</td>
<td>1950–1999</td>
<td>10,498</td>
</tr>
<tr>
<td>RAND</td>
<td>International</td>
<td>1968–1997</td>
<td>8,509</td>
</tr>
<tr>
<td>TRITON</td>
<td>Domestic &amp; International</td>
<td>Mid 2000–Mid 2002</td>
<td>2,452</td>
</tr>
<tr>
<td>RAND-MIPT</td>
<td>Domestic &amp; International</td>
<td>1998–2005</td>
<td>17,423</td>
</tr>
<tr>
<td>COBRA</td>
<td>International</td>
<td>1998–1999</td>
<td>1,041</td>
</tr>
</tbody>
</table>

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The ITERATE (International Terrorism: Attributes of Terrorist Events) data, originally collected by Edward Mickolus,\textsuperscript{14} has probably been the most widely used archival source of terrorism data in terms of empirical research.\textsuperscript{15} ITERATE contains two different types of files: quantitatively coded data on international terrorist incidents and a qualitative description of each incident included in the quantitative files. The quantitative data are arranged into four files, containing: (1) basic information on the type of terrorist attack, including location, name of group taking responsibility, and number of deaths and injuries; (2) detailed information on the fate of the terrorists or terrorist group claiming responsibility; (3) detailed information on terrorist events involving hostages; and (4) detailed information on terrorist events involving skyjackings.

In addition to PGIS, three of the other data sources listed in Table 1 are private risk assessment companies: Cobra, Triton, and Tweed. Tweed prepares an annual register that details political, economic, and social events related to terrorist activities; Triton assembles a list of current global activities of specific terrorist groups; and the Cobra Institute is currently developing a chronology of world terrorism events and detailed information about known terrorist groups.

The U.S. State Department began publishing an annual report on international terrorism in 1982 (reporting 1980 incidents), and in 1984, began calling the report “Patterns of Global Terrorism.”\textsuperscript{16} The Patterns Report reviews international terrorist events by year, date, region, and terrorist group and includes background information on terrorist organizations, U.S. policy on terrorism, and progress on counterterrorism. The \textit{Patterns of Global Terrorism} report for 2003 was issued on 30 April 2004. When it reported that “worldwide terrorism had dropped by 45 percent between 2001 and 2003,” it unleashed a flood of criticism. As a result of this criticism, the name of the report was changed to “Country Reports on Terrorism,” the statistical data and chronology of “significant” international terrorist events was dropped, and the U.S. Congress mandated that starting in 2004, the terrorism statistics were to be compiled by the newly created National Counter-Terrorism Center (NCTC). The NCTC plans to make the new data available to the public on a governmental website (http://wits.nctc.gov).

RAND has collected a detailed set of secondary data on international terrorist events from 1968 to 1997. In addition, in recent years RAND has collaborated with the Oklahoma City National Memorial Institute for the Prevention of Terrorism to develop a detailed secondary data base on both international and national terrorism since 1998. The National Consortium for the Study of Terrorism and Responses to Terrorism (START) is also currently working on a project with RAND that seeks to combine PGIS data from 1970 to 1997 with RAND data after 1997.\textsuperscript{17}

The main reason why the PGIS data base is so much larger than the other secondary data bases in Table 1 is that PGIS gathered information on all terrorist events—both domestic and international. To underscore the importance of this difference, consider that two of the most noteworthy terrorist events of the 1990s—the March 1995 nerve gas attack on the Tokyo subway and the April 1995 bombing of the federal office building in Oklahoma City—both lack any known foreign involvement and hence were pure acts of domestic terrorism. Note also that many of these data bases only track very recent events. For example, Cobra, Triton, and RAND’s new data system all begin after 1998.
A secondary reason for the larger number of cases is that PGIS employed a broader definition of terrorism than the one used by most of the other major data bases. Neither the State Department nor the FBI definition of terrorism includes threats of force. Yet as Bruce Hoffman\textsuperscript{18} points out, “terrorism is as much about the threat of violence as the violent act itself.” In fact, many, perhaps most, aerial hijackings involve only the threatened use of force (e.g., “I have a bomb and I will use it unless you follow my demands”). Similarly, kidnappers almost always employ force to seize victims, but then threaten to kill or otherwise harm victims unless demands are satisfied. Also, the State Department definition is limited to “politically motivated violence.” By contrast, the PGIS definition also includes economic and religious objectives. The apparent comprehensiveness of the PGIS data encouraged us to begin a project to computerize and analyze these data.

The Original PGIS Data

Through the generosity of PGIS and aided by long-time PGIS employee Hugh Barber, in 2001 the senior author arranged to move the original hard copies of the PGIS terrorism data base to a secure location at the University of Maryland. During this transfer process, we discovered that one year of the PGIS data—1993—had been lost in an earlier office move. These data were never recovered. Once the remaining data were transferred to the University, we applied for and secured funds from the National Institute of Justice\textsuperscript{19} to computerize the data. To accomplish this, we first developed a data base codebook and a web-based data entry interface and then pre-tested the instrument for data entry problems. Over the course of a two-month pretest period, we corrected problems with both our instrument and the web-based system we were employing to record data. After we were confident about the quality of the data collection procedures, we developed and implemented data entry training procedures. We conducted training sessions for an original group of approximately 70 undergraduate coders. Over time, training sessions were added as new students joined the project. Once data collection began, we implemented an ongoing process of data verification. Since the original computerization of the data began, we have verified nearly 45 percent of the total cases.

The coding and verification procedure required extensive training to assure that the computerized values matched the original data. Nearly all incidents included information on the date, type of incident, city and country, the target, the weapon, the number of fatalities, and injuries. Most incidents included information on the group and the original media source. When appropriate, the incident reports details on the number of kidnapping victims, the length of time they were held captive, and the outcome. If the incident was a hijacking, the report often included information about the origin of the flight and the final destination. Any additional notes from the original files were preserved in comment fields.

We completed computerizing the original PGIS data in December 2005. Since then we have actively searched open sources to update, correct, and extend the data. This process included comparing the PGIS data with RAND and ITERATE.\textsuperscript{20} We now refer to the resulting data base—constructed on the original PGIS platform—as the Global Terrorism Database (GTD). In April 2006, we received additional funding from the Human Factors Division of the Department of Homeland Security to recover the missing 1993 data and to extend the GTD beyond 1997 (hereafter referred to as GTD2).
Data Collection for GTD2

Current data collection for GTD2 is being conducted by a team led by Gary Ackerman and Charles Blair on behalf of the START Consortium. We began by creating a GTD2 Criteria Committee, composed of a group of international terrorism experts. This committee reviewed the original PGIS criteria and made suggestions for producing a final set of GTD2 collection guidelines. This process was guided by two principles: preserving the value of the PGIS heritage data, while also making improvements in the rigor of the data collection process and the quality of the data collected. Following extensive discussion, the GTD2 Criteria Committee developed a revised codebook for extending the GTD. The new procedures capture more than 120 variables and, unlike the PGIS data, the new data also includes the original open source texts upon which each event is based.

Ackerman and Blair’s team of 25 to 35 data collectors include researchers who are fluent in six language groups (English, French, Spanish, Russian, Arabic, and Mandarin). The current data collection process begins by monitoring general data bases such as Lexis-Nexis (Professional) and Opensource.gov (previously FBIS). A typical day produces as many as 10,000 potential events. Data collectors are asked to review all of these events, to determine which qualify as terrorist events according to the target definition, and then to corroborate each case with at least two additional source articles. Data collectors submit all their expected cases to supervisors for review. Problematic cases are referred back to the GTD2 Criteria Committee for a final decision. Based on these procedures, we expect to extend the GTD2 to 2005 by June 2007.

Evaluating the GTD

Both in the original coding of the PGIS data and in the subsequent editing and data collection efforts connected to developing the GTD, our goal has been to make these data as valid and reliable as possible. Nevertheless, the resulting GTD has both strengths and weaknesses. The original PGIS database had four major strengths. First and most importantly, the original data are unique in that they included domestic as well as international terrorist events. This helped to make the PGIS data approximately seven times larger than any other open source data base for the period covered. Second, PGIS had an unusually sustained and cohesive data collection effort: only two data managers over the 27 years spanned by the data collection effort. We believe that this contributes to the reliability of the PGIS data. Third, there are likely advantages in the fact that the PGIS data were collected by a private business enterprise rather than a government agency. This meant that PGIS was under few political pressures to omit politically sensitive incidents. And finally, the definition of terrorism employed by the original PGIS data collectors was exceptionally inclusive.

The PGIS data collection system also had important weaknesses, both specific to its data collection methods and more generally related to any collection of open source data. Among the weaknesses specific to the data collection, two stand out. First, because PGIS collected the data to provide risk assessment to corporate customers, the data base was designed to err on the side of inclusiveness. As a result, the PGIS data includes many acts that likely would not be included in other terrorism open source data bases. The two most important categories often included by PGIS but usually excluded by others are attacks on property and criminal events. Nearly
53 percent of the 67,179 cases in the original PGIS data involve attacks on property where there are no casualties or injuries. Many of these cases are missed by other open source data bases.\textsuperscript{22}

In addition, PGIS generally included events that appeared to be mostly criminal if they were carried out by a known terrorist group. For example, cases in which the Colombian group FARC appeared to be taking hostages solely to raise funds were generally included in the PGIS data.

In the data collection for GTD\textsuperscript{2}, the Criteria Committee responded to these weaknesses of the earlier PGIS data collection by establishing three criteria that had to be met before an event could be classified as terrorist: (1) The incident must be intentional—the result of a conscious calculation on the part of a perpetrator.\textsuperscript{23} (2) The incident must entail some level of violence (including violence against property) or the threat of violence. And (3) there must be sub-national perpetrators. That is, at the time of the incident, the perpetrator group must not be exercising sovereignty (unequivocal, stable control of demarcated territory; functioning governmental structures). Otherwise it becomes a “state” group and its actions are either state terrorism or covert actions against another sovereign territory and in either case are excluded.\textsuperscript{24}

In addition, the Criteria Committee decided that at least two of the following elements must be present before an incident can be included in the GTD: (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.\textsuperscript{25} (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.\textsuperscript{26} And (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 admonition against deliberately targeting civilians or non-combatants).\textsuperscript{27} Future researchers wanting to impose a more stringent definition of terrorism—by requiring that each incident meet all three criteria—will be able to do so.

Another important change instituted by the Criteria Committee is the requirement that every case included be verified by independent sources. The original PGIS data collection often included events that were drawn from a single source. In contrast, the new data collection requires that each case included be verified by two separate sources.

Even with these improvements, there are still at least two serious drawbacks of open source data bases that should be mentioned. First, although we are making extensive efforts to uncover all relevant media sources, all open source terrorism data bases rely on data culled from news sources and are thus inherently biased toward the most newsworthy forms of terrorism.\textsuperscript{28} In particular, it is reasonable to conclude that media accounts will be more likely to miss attacks that were averted by authorities, that were unsuccessful, or that happened in regions of the world with less media penetration. Although the GTD and other open source data bases include events that were prevented by authorities, it is certain that some potential terrorist attacks never came to the attention of the media and are thus excluded. For example, PGIS reports only one terrorism incident in North Korea over the entire 27-year period—an unlikely conclusion. A related issue is that the media is often unable to identify perpetrators. Without information concerning perpetrators, it is often difficult to accurately classify incidents as terrorism, because all definitions of terrorism rely to some extent on the putative motives of attackers.

Second, the GTD, like all other open source data bases, lacks information on other important issues associated with each terrorism incident. For example,
Alex P. Schmid and A. J. Jongman highlight the fact that there is a scarcity of data on terrorist organizations and terror utilized by states against their citizens. Open source data bases, including the GTD, also lack information on the characteristics and careers of members of terrorist movements. Also, like all other existing open source data bases, the GTD includes no systematic information on government responses to episodes of domestic terrorism and little information on the outcome of terrorist campaigns. Of course, the lack of data on terrorist groups is explained in part by the fact that their clandestine nature makes data collection difficult. The media tends to focus on terrorism employed by non-governmental insurgents rather than state terrorism. Overall, the main reason for the large quantity of information on the characteristics of sub-state terrorism incidents is because this information is more readily available from media sources. Thus, it is important to recognize that the data captured in open source terrorism data bases are limited and are appropriate for only certain types of studies.

GTD Data, 1970 to 1997

At present, our plan is to first release to researchers the coded GTD database from 1970 to 1997. We also plan to release the GTD2, 1998 to 2005, after they have been collected and verified, although an exact release date has not yet been established. Eventually, our longer-term goal is to release new additions to the data on an annual basis. In this section, we present an overview of just the data available from the computerization of the 1970 to 1997 GTD data. Those interested in gaining access to the data should periodically visit the National Consortium for the Study of Terrorism and Responses to Terrorism’s website for updates (http://www.start.umd.edu/). Protocols will be established to assure that researchers have access to relevant documentation of the data at the time of their release.

Between 1970 and 1997 (excluding 1993), the GTD records 69,099 terrorism incidents. To put these data into a comparative context, in Figure 1, we compare the

![Figure 1. Terrorism incidents for RAND and GTD from 1970 through 1997.](image-url)
GTD data to the international terrorism data collected by RAND. Most striking is the vast difference in magnitude between the two data bases. If we were to exclusively focus on international terrorism, we would miss information on more than 60,000 incidents. Moreover, without collecting information on domestic terrorism, we are unable to examine groups that begin by attacking targets within their own country before expanding to international targets.

Looking exclusively at terrorism trends from the GTD, we see that terrorism events increased steadily from 1970 to a peak in 1992, with 5,325 events worldwide. Through 1976, recorded terrorist attacks were relatively infrequent, with fewer than 1,000 incidents logged into the data base each year. From 1978 to 1979, the frequency of reported events nearly doubled. The number of terrorist events continues a broad increase until 1992, with smaller peaks in 1984, at almost 3,500 incidents, and 1989, with more than 4,300 events. After the global peak in 1992, the number of terrorist incidents declined to just over 3,500 incidents at the end of the original data collection in 1997.

To better understand the distribution of terrorism events and their lethality, we calculated the distribution of incidents and fatalities according to their region (see Appendix A for countries included in each region). Figure 2 shows that terrorism and terrorism-related fatalities occur in Latin America nearly twice as often as any other region of the world—more than seven times as often as Sub-Saharan Africa; and nearly forty times more often than North America. Europe rates second with more than 21 percent of all global terrorism, followed closely by Asia at nearly 18 percent. The Mid-East/North Africa region follows with just over 13 percent of the incidents, and Sub-Saharan Africa and North America account for the smallest proportion of terrorism events (5.78 and 1.68 percent, respectively).

Figure 2 also shows that the distribution of fatalities by region differs greatly from that of total incidents. While Latin America remains the leader in fatalities as well as in the proportion of total incidents, Asia has the second highest percentage of fatalities by region, accounting for nearly 25 percent of all terrorism-related fatalities (24.57). Figure 2 also shows that while Europe is second in the proportion of attacks, it suffers relatively few fatalities as a result of these incidents, averaging only 0.53 deaths per incident. This rate is especially low compared to that for

![Figure 2. Percent distribution of incidents and fatalities by region.](image)
Sub-Saharan Africa, which averages five deaths for every terrorism attack. Thus, while the Sub-Saharan African region accounts for a relatively small proportion of total terrorist attacks during this period, when there were attacks in this region, they were on average deadlier. The reasons for these differences remain to be explained, although part of the explanation may simply be media differences in reporting and proximate access to medical care across regions.

We turn now to the distribution of terrorism activity for each region over time. Figure 3 disaggregates the trend line of Figure 1 to show which regions are driving each portion of the trend from 1970 through 1997. If we examine this graph only from 1970 until 1978, it appears that terrorism is mostly a European problem. But after 1978, Europe peaks at over 1,000 attacks in 1979 and then drops to an average

![Figure 3. Frequency of attacks by region over time.](image)

![Figure 4. Terrorism tactics by region.](image)
Figure 5. Terrorism activity over time for select countries.

Figure 6. Attack patterns for terrorist groups in Colombia.
of 569 attacks a year. Latin America, on the other hand, continues to rise after 1978 and peaks in 1984 with over 2,100 incidents. After 1984, Latin America continues to average about 1,400 incidents a year with large fluctuations. Especially interesting for the Latin American series is the steep drop that reaches a low point in 1995 at 515 incidents. Figure 3 shows that the steady increase in global terrorism rates is driven in large part by the relatively recent increase in the frequency of attacks in Asia and Sub-Saharan Africa. Figure 3 also shows that compared to other regions, North America has experienced a relatively small proportion of terrorist attacks during this period.

Not only does the GTD provide information about the frequency of attacks, but it allows us to examine the geographical distribution of terrorist tactics. In Figure 4, we show the five most common types of terrorist tactics by region (see Appendix B for definitions of all seven recorded tactics, including the five shown in Figure 4). While all five tactics were relatively common in all six regions, there were substantial differences in their distribution. For example, terrorist attacks in North America and Europe relied on bombs much more than facility attacks. By contrast, terrorist

Figure 7. Attack patterns for terrorist groups in Northern Ireland.
attacks in Asia and other regions relied less on bombs but were more likely to involve facility attacks. Finally, we see that in all regions of the globe, terrorists were less likely to rely on kidnappings and hijacking than on bombings, facility attacks, and assassinations.

Of course these patterns may be partly due to risk management strategies. As described in Appendix B, facility attacks are riskier than bombings for the attackers. While both types of attacks can use bombs, a facility attack requires that the perpetrators be present during the attack. In contrast, given the PGIS definition (adopted by the GTD), an event is classified as a bombing when the bomb is set well before the explosion, thus allowing the perpetrators sufficient time to get away from the area. Thus, Figure 4 suggests that compared to terrorists in non-Western regions and Latin America, terrorists in Europe and North America may be more risk averse, or they may simply have access to more sophisticated materials and skills that make remotely activated attacks easier.

Because the GTD documents each incident, we can disaggregate results down to the city level. The next series of graphs examines the patterns of terrorism for the

![Figure 8. Attack patterns for terrorist groups in India.](image)
country with the largest number of events in each of the six regions identified above. We then disaggregate trends by the most active groups within each of these countries. Figure 5 shows the six countries with the highest number of total terrorist incidents from each major region.\footnote{Interestingly, each country has very distinct trends. Colombia, India, and South Africa had relatively few terrorism attacks in the early 1970s, but then experienced dramatic escalation in later years. Other countries showed a “boom and bust” pattern. Thus, the number of terrorist attacks in the United States peaked in the late 1970s but then declined during the 1980s, with later, smaller peaks occurring in the 1990s. In fact, until the early 1990s, the United States had relatively few terrorism incidents in the GTD. Unlike the United States, Northern Ireland and Turkey had at least two peaks in terrorism activity, first in the 1970s and then again and more dramatically in the early 1990s.}

The distinct trends across countries lead us to look also at patterns of terrorism group activity within each country. In the next six figures, we present graphs of the terrorism trend for each country and compare it to the trends for its most active groups. In some cases, the most active group was a generic category reported in the media. In these instances, we kept the first letter of the group name in lower case.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure9.png}
\caption{Attack patterns for terrorist groups in Turkey.}
\end{figure}
We also graphed the patterns of terrorist incidents in which no group claimed responsibility in open source reports. Figure 6 presents these comparisons for five groups in Colombia: the National Liberation Army (ELN), the Revolutionary Armed Forces of Colombia (FARC), the 19th of April Movement (M-19), the generic category “narco-terrorists,” and unknown attackers. Overall, the peaks in the mid to late 1980s can be explained by the heightened activity of the three specific groups and narco-terrorists. The two most recent peaks in the early and late 1990s are driven mostly by the rising frequency of terrorist activities where no group claims responsibility.

The trends in Figure 7 clearly demonstrate that patterns of terrorism in Northern Ireland are dominated by the activities of the Irish Republican Army (IRA). Peak attack years for the IRA were 1972, 1979, 1983, 1988, and 1991—also peak years for terrorism in Northern Ireland overall. Apart from the IRA, the two most active groups in Northern Ireland (the Ulster Freedom Fighters and the Ulster Volunteer Force) have much lower attack rates (203 and 251, respectively, compared to 2,299 for the IRA).

Turning next to Figure 8, comparisons of total terrorist attacks in India and major terrorist group activity in India, we see that terrorism attacks in India remain

![Figure 10](image-url). Attack patterns for terrorist groups in South Africa.
below 100 incidents a year until 1984. However, there is a substantial increase in attacks in the mid-1980s, reaching a peak in 1988 at 364 incidents. According to Figure 8, the overall pattern of incidents in India is driven by attacks either attributed to the generic category “Sikh extremists” or where the exact group was unknown. In fact, these two categories comprise more than 60 percent of all attacks in India. The generic category “Muslim separatists” accounts for much of the sharp increase in attacks in India in 1995. The least active of the groups included—Bodo Militants, Kashmiri Militants, and the Maoist Communist Center (MCC)—are associated mostly with incidents that occurred between 1989 and 1997.

Figure 9 presents Turkish trends in both overall incidents and incidents perpetrated by specific groups. In terms of total incidents, the four most important groups for Turkey are Dev Sol, the Kurdistan Workers Party (PKK), the Turkish People’s Liberation Front (TPLF), and unknown attackers. Whereas heightened levels of terrorist activity in the late 1970s and early 1980s were largely due to groups whose identity was unknown, more recent increases in Turkish terrorism are largely explained by the attacks of the PKK.

Figure 10 presents the patterns for total attacks in South Africa compared to the African National Congress (ANC), the Inkatha Freedom Party (IFP), the

![Total Attacks in the United States](image1.png)

![Attacks by Top Groups in the United States](image2.png)

**Figure 11.** Attack patterns for terrorist groups in the United States.
generic category “white extremists,” and unknown attackers. If we only examine attacks where known groups were involved, the ANC was responsible for most of the terrorist attacks in South Africa during this period. Yet, this is clearly also a story about unclaimed responsibility for violence.\textsuperscript{38} The decline in terrorist activities by the ANC and IFP occurred at a time when the apartheid system was being dismantled. Both the ANC and IFP became official political organizations in 1990 and officially ended their use of violence. The rise in terrorist activities of unknown groups occurred during the period of South Africa’s transition to democracy and the surge in violence is most notable around the year 1994, which is the year of the first free elections in the country.

Figure 11 compares total incidents for the United States with the five groups that were most active during this period: the Armed Forces of Puerto Rican National Liberation (FALN), the New World Liberation Front (NWLF), the Jewish Defense League (JDL), the generic category “anti-abortion activists,” and attacks where no group claimed responsibility. Attacks by FALN, NWLF, and JDL were most common between 1970 and 1980. Since then, most activity in the United States recorded in the GTD is due to attacks by members of the anti-abortion movement.

Discussion and Conclusions

The scope of open source data bases on terrorist events has greatly expanded since the early 1970s. The GTD contributes to this development by providing for the first time a comprehensive collection of terrorist events including both domestic and international incidents for several decades. While these data have some well-known limitations, they also provide a wide variety of analysis opportunities. We are finding the GTD to be particularly useful for assessing the impact of specific policies or events on the future risk of terrorist activity of a particular type. Thus, we have used the data base to examine the impact of specific anti-hijacking policies on the risk of aerial hijackings,\textsuperscript{39} the impact of British military and criminal justice policies on the risk of further terrorist strikes by Republican groups in Northern Ireland,\textsuperscript{40} and the effect of an especially bloody attack on support for the ASALA and JCAG in Turkey.\textsuperscript{41}

The data also have promise for geospatial analysis. We have been able to geocode down to the city level approximately 70 percent of the original PGIS data, and all of our new data collection includes geo-coding. For example, one current project focuses on terrorism attacks in Spain that identifies “hot spots,” temporal changes in the spatial distribution of incidents, and tests models of diffusion.\textsuperscript{42}

The data can also be merged with other data bases to allow analysis of global or regional determinants of terrorist events or to examine the effect of global or regional terrorist events on other variables. Thus, we are currently developing a cross-sectional analysis that merges the GTD data with other sources to estimate the effects of political, economic, and social indicators on terrorism events.\textsuperscript{43} We have also completed an analysis that examines the economic impact of terrorist events on Italian provinces in the 1970s and 1980s.\textsuperscript{44}

In response to the challenges raised by collecting valid data on terrorist events, researchers have been gradually developing more extensive open source terrorism data bases. At the moment, the Global Terrorism Database (GTD) is the largest and most extensive of these efforts. Our hope is that by making these data available to the research and policy communities we will be able to improve the quality of research being done on terrorism and provide better informed policy alternatives.
Notes


5. J. Junger-Tas, Gert-Jan Terlouw, and M. Klein, eds., Delinquent Behavior Among Young People in the Western World (Amsterdam: Kugler, 1994).


13. The actual recording of a source was one of the data collection strategies that evolved over time for the PGIS data collectors. Thus, in 1970 the original PGIS data only included a source in 32 percent of the recorded terrorist incidents. By 1978, PGIS data collectors recorded specific sources for the events recorded in 95 percent of the cases. By the early 1980s, nearly all incidents had at least one source recorded.


20. It was not possible to directly and systematically compare the PGIS data with RAND and ITERATE given the differences in the definitions and scope of terrorism attacks between PGIS data and the other datasets. However, we were able to use RAND and ITERATE data to update and append cases when appropriate. We regard updating the data as an ongoing task that will continue after the data are released as new or more valid information continues to surface.

21. The current committee includes Gary Ackerman, Victor Asal, Martha Crenshaw, Laura Dugan, Michelle Keeney, Gary LaFree, Clark McCauley, and Alex P. Schmid.
22. All open source terrorism data bases struggle with this problem. For example, the State Department *Patterns* data included what the authors considered to be “significant” terrorist events, but what constituted significant property damage was left undefined until the NCTC took over the data base in 2004—henceforth significant property damage was defined as $10,000 or more.

23. 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 it. As long as the act is the result of someone’s conscious decision, it meets the criterion. Because determining intentionality is difficult, this criterion is assumed to be met based on prima facie evidence unless there is some indication otherwise. Also, whether or not the actual target was the intended target, so long as there was an intention to use violence, this criterion is met. For example, mistaken identity assassinations satisfy this criterion.

24. When a state finances, arms, trains, or otherwise influences a non-state group, but does not directly control its behavior and the members of the terrorist group are not employees of the state, then the group can still be regarded as a terrorist group and its actions be considered terrorist actions. If, however, a state plays an active (and determinative) role in the planning of attacks or other activities of the terrorist group (i.e., substantially controls the group’s actions), then we do not consider the group to be a separate, non-state entity, but rather we regard it as part of a state’s covert apparatus to be used against other states or groups. In this case, the activities of the group are not included in the data base.

25. Although incidents with purely economic motives are not included in the GTD itself, the collection process still records those incidents in which a known terrorist group (e.g., PKK or FARC) conducts an action for fundraising purposes.

26. We should also note that 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. Thus, as long as a planner or decision maker behind the attack intended to coerce or publicize an issue, the intentionality criterion is met.

27. Note that any action satisfying two of these three criteria qualifies, irrespective of the nature of the actor or the motive, as long as the actor or motive is not specifically excluded from the list.


31. Ibid., 28.

32. This figure is based on the available GTD as of September 29, 2006. Because the data base is being continuously updated, numbers change somewhat with successive revisions.

33. Although the original PGIS data from 1993 were lost, we were able to reconstruct totals for major categories from a PGIS report for 1993.

34. We recognize that the relatively small number of recorded incidents from 1970 through 1976 could be in part a consequence of the fact that PGIS data collectors simply invested fewer resources in data collection during the early years of data collection. Based on an analysis of the data, we do know that the early data are based on fewer recorded sources than the later data. Thus, for the year 1970, PGIS only reported 6 different sources, but by 1977 they reported 53 separate sources. However, this assessment is further complicated by the fact that PGIS data collectors frequently excluded their sources in the early years—68% of the cases in 1970 and 42% in 1977 included no sources. We should also point out that media-related information sources also increased dramatically during this period, especially media penetration of the industrializing world, which might account for at least part of the increase in rates since 1970.

35. The composition of countries within each region was determined by PGIS.

36. Mexico is counted here as part of Latin America instead of North America.

37. For convenience, we treat Northern Ireland here as a country.


### Appendix A: Countries Listed Under Each Region According to PGIS

<table>
<thead>
<tr>
<th>Region</th>
<th>Countries/Territories</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>Canada, the French territory of St. Pierre and Miquelon, and the United States</td>
</tr>
<tr>
<td>Latin America</td>
<td>Anguilla, Antigua and Barbuda, Argentina, Aruba, Bahamas, Barbados, Belize, Bermuda, Bolivia, Bonaire, Brazil, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Curacao, Dominica, Dominican Republic, Ecuador, El Salvador, Falkland Islands, French Guiana, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Saba, St. Barthlemy, St. Eustatius, St. Kitts and Nevis, St. Lucia, St. Maarten, St. Martin, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos, Uruguay, Venezuela, and the Virgin Islands (British and U.S.)</td>
</tr>
<tr>
<td>Europe (including former USSR countries)</td>
<td>Albania, Andorra, Armenia, Austria, Azerbaijan, Belgium, Bosnia-Herzegovina, Bulgaria, Belarus, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Gibraltar, Greece, Greenland, Hungary, Iceland, Ireland, Italy, Kazakhstan, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Isle of Man, Moldova, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Montenegro, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Turkmenistan, Ukraine, United Kingdom, and Uzbekistan</td>
</tr>
</tbody>
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(Continued)
Appendix B: Incident Type Definitions

Assassination

The objective of the act is to kill a specific person or persons. Normally the victim is a personage of note, a policeman, government official, etc. The key is—what was the objective of the act? For example, an attack on a police jeep usually is a facility attack, but an attack against a single police officer on a post is an assassination, i.e., the aim was to kill that specific man. Some incidents of this nature will be judgment calls and may be categorized either as assassinations or facility attacks. Generally, when the attack is against a jeep full of police, a police post, a military outpost, military vehicles, etc., it is coded as a facility attack. In an assassination, the thrust is concerning an identified person or persons rather than several unknowns, as would be the case in an attack on a police vehicle occupied by several persons or against a police/military post.

Assault

The objective of the act is to inflict pain or injury upon the victim(s), but not cause loss of life or permanent ill effect such as maiming. Normally involves the use of

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### Region Countries/Territories

<table>
<thead>
<tr>
<th>Region</th>
<th>Countries/Territories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle East and North Africa</td>
<td>Algeria, Bahrain, Cyprus, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates, and Yemen</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Reunion, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zaire, Zambia, and Zimbabwe</td>
</tr>
<tr>
<td>Asia</td>
<td>Afghanistan, Australia, Bangladesh, Bhutan, Brunei, Cambodia, China, Cook Islands, Fiji, French Polynesia, Guam, Hong Kong, India, Indonesia, Japan, Kiribati, Laos, Macao, Malaysia, Maldives, Marshall Islands, Micronesia, Mongolia, Myanmar, Nauru, Nepal, New Caledonia, New Zealand, Niue, North Korea, Northern Mariana Islands, Pakistan, Palau, Papua New Guinea, Philippines, Samoa (U.S.), Singapore, Solomon Islands, South Korea, Sri Lanka, Taiwan, Thailand, Tonga, Tuvalu, Vanuatu, Vietnam, Wallis and Futuna, and Western Samoa</td>
</tr>
</tbody>
</table>
some type of weapon, including such basic devices as stones, bricks, sticks, etc. Often occurs as the result of political, religious, ethnic and other factional disputes. For the purposes of the PGIS data base, does not include acts of purely personal or criminal nature.

**Bombing**

The object of the act normally is destruction or damage of a facility through the covert placement of bombs. The action is clandestine in contrast to a facility attack. Normally, the identity of the perpetrator(s) is not known at the time, although claims of responsibility often follow. The devices are usually placed at night or at least covertly and detonate after the bombers have departed. Bombings do not involve taking a facility or installation by attack and then placing bombs. In contrast to a facility attack, which often is aimed at physically taking over the installation, a bombing is designed simply to destroy or damage it. The clandestine nature of bombing separates it from facility attacks, as does the fact there is no intention to take the installation or occupy it, or to take hostages. The target of a bombing often is unoccupied or its occupants asleep.

**Facility Attack**

The objective of the act is to rob, damage, or occupy a specific installation. The term installation includes towns, buildings and in some cases, as mentioned previously, vehicles. Thus a bank robbery is a facility attack although all its guards may have been killed. The objective in such an action was robbery of a facility, not killing the guards. The occupation of a town, wherein persons may be killed or wounded, also is a facility attack since the objective was to take the town (installation), not kill or wound persons. Again, it is the objective of the operation that is the determining factor. The idea or objective of the operation is important if, for example, bombs are left behind by the attackers. In such a case, the bombing of the building was not the aim—the aim was to take it over by assault. Bombs were left to do additional damage and/or cause disruption to facilitate the escape of the attackers. Facility attacks may be carried out using automatic weapons, explosives, incendiaries, etc. Normally, a multi-member team is involved. The operation is carried out openly—in contrast to the covert placement of bombs at night. Hostages may be taken, but this is not the primary objective of the act.

**Hijacking**

The objective of the act is to assume control by force or threat of force of a conveyance such as an aircraft, boat, ship, bus, automobile, or other vehicle for the purpose of diverting it to an unprogrammed destination, obtain payment of a ransom, force the release of prisoners, or some other political objective.

**Kidnapping**

The objective of the act is to obtain payment of a ransom, force the release of political prisoner(s), or achieve some other political objective. If the person is killed in the course of the kidnapping process, this does not make it an assassination. It still
remains a kidnapping. Kidnapping is aimed at a specific person(s). A facility attack against a bank, wherein hostages may be taken, is not a kidnapping because the hostage-taking is incidental to the primary objective.

**Maiming**

The objective of the act is to inflict permanent injury, disfigurement, or incapacitation upon the victim(s) but not cause loss of life. “Kneecapping” and castration are examples of maimings. For the purposes of the PGIS data base, does not include acts of a purely personal or criminal nature.