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The old terrorism: a dataset, 1860 – 1969

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ABSTRACT
Since the 9/11 terrorist attacks, research on terrorism has grown exponentially. Data limitations, however, have made temporal generalization difficult. Most terrorism datasets extend back only to the 1970s, which inhibits the ability to quantitatively examine earlier waves of terrorism. To address this limitation, this article presents a dataset of over 250 terrorist organizations formed between 1860 and 1969. These data, which have global coverage, include country-year information on group formation, allowing scholars to examine the relationship between various country-year factors and the emergence of terrorist organizations. To illustrate their usefulness, these data are used to examine the relationship between democracy and terrorist group formation. Following several recent studies, the empirical analysis reveals a curvilinear or inverted u-shaped relationship between terrorism and democracy.

KEYWORDS
Terrorism; data; terrorist groups; democracy

Since the September 11\(^1\), 2001 terrorist attacks, research on terrorism has grown exponentially. Even in 2004, Silke (2004, 25) estimated that an average of three books on terrorism were published weekly after the attacks. A more recent meta-analysis surveys nearly 3,500 articles on terrorism across the leading terrorism subfield journals, finding an increase in studies using inferential statistics over time (Schuurman 2018). Not only does the field continue to grow, it is also becoming more methodologically sophisticated as scholars move from descriptive case study to quantitative analysis.\(^2\) Major political science journals similarly witnessed a significant increase in articles on terrorism following 9/11, many of which use statistical methods (Young and Findley 2011).\(^3\) Undoubtedly, the availability of large data sets, such as START’s Global Terrorism Database (GTD), has facilitated this rapid growth in quantitative terrorism research.

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\(^1\)I want to thank the editors and anonymous reviewers at International Interactions for their helpful comments on previous versions of this manuscript. The terrorist group data presented in this article are available at www.jtschantret.com/data.

\(^2\)Of course, both approaches and many others are useful for understanding terrorism.

\(^3\)For instance, Young et al. (2011) observe the greatest increase in terrorism-related publications in the Journal of the Conflict Resolution, which predominately publishes quantitative research.

Supplemental data for this article can be accessed on the publisher’s website.

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Despite immense progress, the ability to generalize terrorism research across time is hindered by data limitations. Most terrorism datasets, such as the GTD, begin around 1970. Jones and Libicki’s (2008) extensive compilation of terrorist groups similarly traces back to 1968. Engene’s (2004) TWEED dataset covers the 1950 to 2004 time period, although it is restricted to incidents in Western Europe. Given that many researchers were galvanized to study terrorism after 9/11, this relatively short temporal scope is understandable. Yet, many theories, such as Rapoport’s (2001) four waves of terrorism thesis, pertain to long time periods and thus cannot be adequately examined given existing data. Many scholars, including those using Rapoport’s four waves framework, seek insight into the current wave of Islamist or religious terrorism in the anarchist and nationalist waves in the nineteenth and early twentieth centuries (Bergesen and Lizardo 2004; Fettweis 2009; Jensen 2008). Since extant terrorism data does not extend back sufficiently far, however, this research is almost entirely restricted to case studies. While qualitative studies are important, the logical next step is to gather historical data to allow researchers to learn more systematically about early terrorism in part to better understand its present manifestations.

To address this gap, this article presents new and original data on terrorist groups formed between 1860 and 1969. The article proceeds as follows. First, it outlines a definition of terrorism. The goal is to develop a historically and theoretically consistent way to operationalize terrorism that can guide the data collection process. Second, the data gathering and coding process is outlined, with attention to important issues such as how terrorist groups are differentiated from other non-state actors. Third, a cursory look at the spatial and temporal patterns in the data is provided. Fourth, the data are used to examine a longstanding concern in terrorism studies: the relationship between terrorism and democracy. As Chenoweth (2013) notes in a thorough review of the terrorism and democracy literature, data limitations have made research in this area insensitive to historical trends. This empirical analysis sheds light on how these data can contribute to ongoing controversies in the literature.

**What Is Terrorism?**

Few concepts are as essentially contested as terrorism. Even in the 1980s, over one-hundred definitions were discovered in the literature (Schmid and Jongman 1988). One commonly used definition is “the strategic use of violence by clandestine and relatively few nonstate actors to attract attention, convey a political message, or [gain] influence” (Wilson and Piazza 2013, 942; see Hoffman 2006; Jenkins 1975; Laqueur 1977, 2000; Schmid et al.

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4Rasler et al. (2009) perform a data-driven analysis of the four waves hypothesis, although it extends back only until 1968.
Terrorism can thus be analytically distinguished from related concepts such as insurgency, which involves capturing and holding territory to achieve military victory (Jenkins 1975; Kalyvas 2006; Sanchez-Cuenca and de la Calle, 2009; Wilson et al. 2013). One limitation with this conceptualization is that it is not straightforward to operationalize. How can we accurately determine, across a large number of cases, whether violence is clandestine or designed to attract attention? The latter is problematic since gauging the intent behind every terrorist act or group is fraught with difficulties.

One solution to this dilemma is to use the tactical approach to defining terrorism, which considers terrorism a particular “method of combat, strategy, [or] tactic” (Weinberg, Pedahzur, and Hirsch-Hoefler 2004, 781). Some tactics considered characteristic of terrorism, such as bombings and assassinations (Findley and Young 2012, 290; Jones 2017; Kydd and Walter 2006; Rapoport 1971), attract attention by design due to their extravagance. They also entail clandestine activity: one cannot plant a bomb or approach a head of state revolver-in-hand without some concealment. We can thus consider terrorism a repertoire of violence, or a violent subset of the “means [a group] has for making claims of different kinds” (Tilly 1986, 4; Wood 2008). Terrorism is motivated by political claims, for otherwise it is difficult to distinguish from criminal activity, although what distinguishes it from other political violence is the means for claim making. Compared with insurgency, which focuses on direct confrontation with government forces and controlling civilian populations to hold territory, terrorism uses covert methods that allow actors to attract attention to their cause (e.g. separatism, policy change). While these are not mutually exclusive strategies, this conceptualization brings us closer to an operational definition.

Note that this conceptualization does not require that violence is aimed at innocent civilians, a criterion that many scholars use to define terrorism. Many early terrorists —Russian nihilists, anarchists, leftists, and various nationalist groups from the first three terrorist waves —were largely dedicated to assassinating state leaders and bombing government targets rather than killing civilians. As Jenkins (1975) famously wrote in the 1970s, “[t]errorists want a lot of people watching and a lot of people listening, not a lot of people dead,” suggesting that civilian victimization was not a defining attribute of terrorism during the earlier waves. Since this criterion does not generalize well across time, a tactical conception that focuses on the violent methods, or the repertoire of violence, groups use is a more adequate indicator of terrorism. Studies of early terrorism implicitly adopt this understanding of terrorism by placing groups engaging in bombings and assassinations under the label irrespective of their targets (e.g. Jensen
2004). Some studies on long-term trends in terrorism explicitly use bombings and assassinations as indicators (Rasler and Thompson 2009).

The Data

For this project, original data on terrorist groups formed between 1860 and 1969 was created. Historical research on terrorism indicates that 1860 is an appropriate start date for the origins of modern terrorism: 1861 marks Karakozov’s attempted assassination of Alexander II, which inspired the Russian nihilists (Verhoeven 2009), the United States witnessed the rise of white supremacist terrorist organizations, such as the Ku Klux Klan, in the 1860s; Irish nationalist terrorism has its origin during this time (Clutterbuck 2004). No significant terrorist movements were found in the preceding decades. The end date is selected because existing datasets, including the GTD, which already contain detailed information on terrorist attacks and their perpetrators begin around 1970. Creating this dataset, which contains 263 terrorist groups, involved searching many books and articles on historical terrorism, political violence, and contentious politics to identify terrorist groups and the country-years in which they were created. Many of these sources are carefully delineated histories based on archival research, which together constitute a significant yet hitherto - untapped resource in the nomothetic study of terrorism. Appendix §3 includes a bibliography of the secondary sources consulted.

Data on terrorist groups, rather than incidents, are gathered for three primary reasons. First, gathering accurate cross-national data on historical terrorist incidents is impossible, at least without a team of dedicated archivists with unique regional expertise. For example, Geifman (1993, 21), in a carefully researched history on Russian terrorism, writes that Russian authorities recorded 19,957 terrorist acts between January 1908 and mid-May 1910. Whereas pinpointing how many terrorist attacks occurred even in

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5These scholars include hostage incidents, although this category is excluded since (as a practical matter) no groups were found that used hostage taking but not bombings or assassinations. Bombings are defined as the use of explosives or incendiaries, including suicide bombings, car bombings, and grenade attacks. Assassinations are politically-motivated murders. See Rasler and Thompson (2009, 34). Studies using the GTD data also implicitly adopt this understanding of terrorism, since the data include both attacks against civilian and non-civilian targets.

6The Russian nihilists are widely considered the first modern terrorists (see Rapoport 2001).

7Historical instances of terrorism, such as the Zealots-Sicarii, can be found (Rapoport 1983). However, these are rare and found in but a few locations until the mid-nineteenth century. The world never before witnessed a global explosion of terrorism the way it did in the mid-nineteenth century. If anything, the few instances of earlier terrorism are historical precursors to modern terrorism. For this reason, even scholars who study previous bouts of terrorism write that the modern phenomenon arose in the nineteenth century (Rapoport 1971, 46, 2001).

8While exercising caution is necessary when combining datasets from different sources into a single time series, the GTD allows users to select terrorist groups based on the indicators for terrorism used in constructing this original dataset. Thus, it is reasonable to combine these data sources for projects seeking to explore long-term trends in terrorism. Hou et al. (2019) present an extended dataset of terrorist groups from the GTD that could serve as a point of departure for creating a complete list of terrorist groups.
a single country-year is often unmanageable, there is now abundant historical evidence on the terrorist groups responsible for these attacks, including information on the time and location of their formation. Second, terrorism is overwhelmingly a group-level activity (Crenshaw 2000, 409). Since seemingly isolated terrorists are deeply influenced by broader social movements, some scholars argue that the “lone-wolf” label should be discarded (Berntzen and Sandberg 2014; Schuurman, Lindekilde, Malthaner, O’Connoer, Gill, and Bouhana 2018). Attention to terrorist groups overlooks incidents, including some high-profile assassinations, perpetrated by lone anarchists. Yet, very frequently these occur in states where formal organizations existed. Third, some scholars advocate attention to terrorist groups for theoretical reasons. Many studies are concerned with how the social and political environment plays “a role in shaping the incentives of aggrieved groups to begin employing violence” rather than levels of violence after the initial spark (Aksoy and Carter 2014, 3; see Chenoweth 2013 on the organizational school of terrorism and democracy research). Even though they are not practical for studying large variations in violence, group-level data allows researchers to explore the conditions under which group violence arises in the first place.

As alluded to earlier, terrorist groups are operationally defined as politically-motivated non-state actors using bombings or assassinations.9 Two strengths to this coding are evident. First, it provides a replicable indicator for coding terrorist groups. While it is difficult to replicate coding culled from historical sources, using this straightforward criterion allows other scholars to verify the validity for including different groups. Second, bombings and assassinations capture the type of violence that is most frequently associated with terrorism in the historical literature (e.g. Jenkins 1975; Jensen 2004; Rapoport 1971, 46; 2001). Although many other violent tactics are also terroristic (e.g. sabotage, shootings), bombings and assassinations are most representative of the type of violence scholars have referred to as terrorism.10

Moreover, very few groups were encountered in gathering sources that engage in other forms of terrorism but not bombings or assassinations.

Two indicators are used to determine whether a terrorist group is sufficiently organized to constitute a “group,” both of which are considered sufficient to code it as a terrorist group. First, when a group has an organizational name – such as the Ku Klux Klan, Viking League, or Korean Patriotic Organization – it is assumed that its members have cognitive awareness of themselves as participants in a group working toward common objectives. Second, when a group has no formal organizational name — such as the “conspiracy” group led by Aleksandr Ulyanov, Vladimir Lenin’s

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9 Note that these are not mutually exclusive, since a group may use bombings to commit assassinations; however, most assassinations uncovered were committed with guns.

10 See Findley et al. (2012); Jones; Laqueur (2000); Rapoport (1971); Rasler et al. (2009).
brother — it is coded as a group when there are at least five members observed working together to carry out terrorist attacks (again coded as bombings or assassinations). Following recent research on terrorist groups, terrorist groups are defined simply as “subnational political organizations that use terrorism,” where terrorism is defined according to the definition outlined above (Phillips 2015a).

What groups are excluded from the data? Groups that are better described as rebels, insurgents, or guerrillas are not coded as terrorist groups. For instance, groups whose primary tactics include direct, armed confrontation against government forces are not counted unless they also carried out terrorist attacks. We exclude insurgents fighting conventional civil wars that use artillery to bombard the opposition, since this is a particular technology of rebellion distinct from terrorist violence (see Kalyvas and Balcells 2010). Such tactics are designed to achieve rebel victory rather than “attract attention, convey a political message, or [gain] influence” (Wilson et al. 2013, 942). Similarly, violence whose objective is capturing or maintaining territory, such as razing villages to coerce civilian compliance under insurgent control, is not considered terrorist violence. Interestingly, during the earlier periods (pre-1945), there are very few groups found that simultaneously engage in terrorist and insurgent tactics. However, to avoid missing data, insurgent groups are coded as terrorist groups when there is clear evidence that they carried out terrorist attacks.

Similarly, groups that are best described as criminal are excluded, since there is consensus that terrorism is political violence (Phillips 2015a, 227). To determine political motivation, there must be evidence that the group is motivated by political objectives, such as separatism, regime change, or policy change. In most cases, this evidence is unambiguous, and many groups make their political objectives part of their organizational name (e.g. Polish Socialist Party, Irish Republican Army, Palestine Liberation Front). As outlined in appendix §1, the dataset is restricted to groups with identifiable political ideologies. Lastly, groups that use terrorist tactics but have formal or semi-official ties with the government are not coded as terrorist groups. These are better described as pro-government militias, a topic that receives considerable attention as a distinct concept (see Carey and Mitchell 2017).

Start dates for terrorist organizations are coded based on the year in which the group was first established. Barring reliable information on formation year, the first year in which the group perpetrated a terrorist attack is coded as the starting year. When there is a significant delay between group formation and the first terrorist attack, operationalized as

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11While this is a tautology, not all tautologies are useless or senseless.
12The reason for the mutual exclusivity of these repertoires during the early period is not addressed here.
13Many groups are also tied to political parties (Weinberg, Pedazhur, and Perliger 2009).
14Groups that have external state sponsors, however, are not excluded.
a gap longer than five years, the year of the first attack is instead coded as the
starting date. While formation dates are generally available and unambigu-
ous, reliable termination dates are unavailable for most groups. Many groups
abruptly disappear from the historical record without clear indication as to
their fates. An end date variable is included when group is terminated (e.g., is
defeated, splinters, or disbands) or, in many cases, as the last year of recorded
activity.

**Spatial and Temporal Trends**

How does early terrorism vary across time and space? Research on waves of
terrorism anticipates certain spatial and temporal patterns (Rapoport 2001;
Rasler et al. 2009), although data limitations have made creating a clear
picture of these trends difficult. A lucid picture of these patterns can thus
serve as a useful point of departure for generating new questions about
modern terrorism.

Figure 1 depicts the global distribution of terrorist groups between 1860
and 1969. As shown, terrorism was indeed a global phenomenon during the
nineteenth and early twentieth centuries. With the exception of sub-Saharan
Africa, whose rebels were found to mostly use conventional insurgent stra-
tegies, many terrorist groups were found in multiple countries in every
populated continent. Modern terrorism was never a purely Western phe-
omenon. It is possible that group-perpetrated assassinations did occur in
sub-Saharan Africa even though these do not turn up in the historical record.
Although this is one limitation in the data, it is also likely that terrorist tactics
diffused across continents in waves; exploring these trends in greater detail is
a promising avenue for future research. Additionally, there are some surpris-
ing outliers. Terrorism scholars give ample attention to early terrorism in the
United States, United Kingdom, India, and Russia, and thus their high
number of terrorist groups is expected. China, however, attracts little scho-
larly attention in the literature on terrorist waves, despite evidence here
revealing a high number of active terrorist groups and some historical
work on the subject (Wakeman 1996). Since many of these are anarchist
terrorist groups, exploring this case further could yield insight into why
waves spread beyond their regional origins.

Figure 2 plots the formation of terrorist groups over time. A substantial
increase in terrorist group formation occurs in the late 1960s, consistent with
the initiation of a leftist wave of terrorism (Rapoport 2001). The other two
peaks, at 1905 and 1931, are both consistent with the anarchist wave of
terrorism. Many of the terrorist groups formed in the former were associated
with the 1905 Russian revolution, either as socialist or anarchist movements
involved in violence that swept the country (see Geifman 1993). The 1931
peak is mostly attributed to the formation of several anarchist terrorist
groups in China, including Korean anarchist groups that based their operations in Shanghai (Hwang 2016). One possibility is that rather than seeing three waves of revolutionary terrorism, there are in fact two: one anarchist and one leftist, with the “nationalist wave” simply representing the periodic outbreak of terrorist violence in the service of nationalist-separatist ambitions.

The data include an ideology variable, which indicates whether the group is anarchist, left-wing, nationalist, religious, right-wing, or other. These indicators are chosen because, with exception of right-wing and other, these are the ideologies associated with the waves of terrorism (Rapoport

**Figure 1.** Global distribution of terrorist groups, 1860–1969.

<table>
<thead>
<tr>
<th>Terrorist Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>15+</td>
</tr>
<tr>
<td>5–9</td>
</tr>
<tr>
<td>2–4</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

**Figure 2.** Terrorist group formation, 1860–1969.
2001). Information for this variable is derived from the same historical sources used to create the dataset. A fuller description of this variable is available in appendix §1. Probing the relationship between ideology and terrorism during over a century is beyond the purview of this article. However, it is anticipated that these data will make testing hypotheses regarding terrorism waves more feasible in the future.

What are the Data Good For?

The data include six variables: Group Name, Start Year, End Year, Country, City, Ideology, and Ambiguous.15 A reasonable concern is the viability of these data for future research projects given the limited number of variables. Beyond its suitability for testing hypotheses concerning long-term waves of terrorism, there are other areas for which these data can prove useful. First, these data allow scholars to examine the emergence of terrorist groups over a long period of time. Some theories of terrorism are relevant to why groups “begin employing violence than in determining the level of violence they inflict after turning to violent tactics” (Aksoy et al. 2014, 3), and these data enable scholars to test the implications of these theories over a longer time period than previously possible. Second, it is possible to examine the origins and diffusion of early terrorism as a tactic. Existing research explores the diffusion of terrorist innovation (Horowitz 2010), but we lack explanation for why terrorism itself became a global phenomenon beginning in the nineteenth century. Third, the start and end date variables enable analysis of terrorist group longevity. Recently, numerous studies seek an answer to the important question of why some terrorist groups last longer than others (Cronin 2009; Phillips 2014; 2015b). Fourth, research on other forms of political violence observes important changes in the form, conduct, and causes of violence over time (Kalyvas et al. 2010; Senese and Vasquez 2008, 257). These data enable researchers to explore similar paradigmatic changes in terrorism.

Terrorism and Democracy in History

The association between terrorism and democracy is one of the most examined relationships in the terrorism literature (see Chenoweth 2013 for a review). Data limitations, however, have prohibited scholars from examining whether this relationship holds over time. While most studies posit a linear relationship between terrorism and democracy (Eubanks and Weinberg 1994, 2001; Schmid 1992), others instead argue that intermediate regimes, rather than consolidated democracies, experience the most

15 Appendix §1 describes the variables in greater detail.
terrorism. Gaibulloev, Piazza, and Sandler (2017) maintain that the relationship between democracy and terrorism is curvilinear, since there is little opportunity for terrorism in harsh autocracies and consolidated democracies better address grievances and provide legal pathways for political change. One possibility is that the inverted u-shaped relationship applies to democracy and terrorist group formation, since opportunity and grievance factors influence the incentives groups have to “begin employing violence” (Aksoy et al. 2014, 3). Using new data on terrorist group formation, we can investigate whether democracies are more likely to spawn terrorist groups. Despite its inability to examine terrorist incidents, another benefit of this approach is its long time coverage (eleven decades, as opposed to five decades when the entire GTD data is used).

To examine this relationship, a time-series cross-sectional dataset where the country-year is the unit of analysis is created. The dependent variable, created from the data presented above, is a binary indicator for whether a terrorist group was formed in a given country-year. Two central independent variables are used, which we use for commensurability with previous studies (Gaibulloev et al. 2017): the normalized Polity 2 score and the squared value of this variable. This second variable is necessary to test the argument that the relationship between terrorism and democracy is curvilinear or an inverted u-shape. A negative coefficient on this variable indicates a concave relationship (supporting the curvilinear relationship), whereas a positive coefficient indicates a convex relationship.

Several covariates are included in the model, although these are kept to a minimum for interpretability (Achen 2005). Measures for GDP per capita and population size, standard covariates in the political violence literature, are taken from Haber and Menaldo (2011); the natural log is taken for each variable to render them on scales similar to the other variables. Civil war is an important inclusion, since terrorism occurs more frequently during war time (Findley et al. 2012) and this could confound the relationship between democracy and political violence (Vreeland 2008). Since many datasets on civil war, such as the UCDP Armed Conflict dataset, extend back only till 1945, a binary indicator for civil war during the period under investigation is taken from Breck (2001). Lastly, a cubic polynomial — a count variable since the last time a terrorist group was formed in a country, along with the squared and cubed values for this variable — is included to account for temporal dependence in the data (Carter and Signorino 2010). Beck, Katz, and Tucker (1998) recommend using duration fixed-effects or splines

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16 Multiple terrorist groups were formed in some country-years. However, since these observations are very rare, a binary variable is appropriate. Only unambiguous terrorist organizations are included in this analysis, although the results are indistinguishable when including ambiguous groups.
17 Polity score is normalized between 0 and 1 by adding ten, multiplying by five, and dividing by one-hundred.
18 Appendix §2 shows that the results hold when using XPolity.
19 These data were in turn collated in the Varieties of Democracy 8 dataset.
to address temporal dependency, although separation and knot selection problems, respectively, lead Carter et al. (2010) to recommend cubic polynomials as a superior approach with binary dependent variables.

Since the dependent variable is binary, logistic regression is an appropriate estimation strategy. Standard errors in this model are clustered on the country to account for statistical interdependence. One potential problem is that the coefficients are biased due to the small number of observations coded positively on the dependent variable. Indeed, less than two percent of the observations are coded as experiencing at least one terrorist group formation. To account for this potential limitation, the model is also estimated using Firth’s (1993) penalized maximum likelihood logistic regression. Recent simulation evidence shows that this approach outperforms alternatives, such as rare events logit, and thus is becoming the standard method to address potential rare events bias across disciplines (Puhr, Heinze, Nold, Lusa, and Geroldinger 2017). Several other robustness checks are presented in appendix §2.

Table 1 presents the results from the two models. It shows evidence in favor of the inverted u-shaped relationship between terrorism and democracy. The coefficient on Polity squared is negative at the five percent error level or higher in both models, indicating a concave relationship. Polity score reaches statistical significance in the first model, although the similar strength of the squared value casts doubt on a linear relationship between democracy and terrorism. Robustness checks presented in appendix §2 demonstrate that the unsquared Polity score loses its statistical significance in several alternative model specifications, which further indicates that the relationship is nonlinear. Another finding of interest is that civil war is highly statistically significant in both models. Not only does this confirm previous studies identifying a positive relationship between civil war and terrorism (Findley et al. 2012), but it also provides

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
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<tbody>
<tr>
<td>Polity 2</td>
<td>3.24** (1.65)</td>
<td>3.12* (1.60)</td>
</tr>
<tr>
<td>Polity 2 squared</td>
<td>−3.32** (1.50)</td>
<td>−3.14** (1.45)</td>
</tr>
<tr>
<td>Civil War</td>
<td>1.27*** (0.35)</td>
<td>1.27*** (0.27)</td>
</tr>
<tr>
<td>GDP per capita (ln)</td>
<td>1.04*** (0.20)</td>
<td>1.03*** (0.19)</td>
</tr>
<tr>
<td>Population (ln)</td>
<td>0.62*** (0.12)</td>
<td>0.61*** (0.09)</td>
</tr>
<tr>
<td>Constant</td>
<td>−22.20*** (3.27)</td>
<td>−21.96*** (2.60)</td>
</tr>
<tr>
<td>Observations</td>
<td>4,349</td>
<td>4,349</td>
</tr>
<tr>
<td>Model</td>
<td>Logit</td>
<td>PML</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses

*** $p < .01$, ** $p < .05$, * $p < .1$

PML = penalized maximum likelihood
evidence that this relationship is consistent across time. Moreover, these results entail that civil war contributes to the formation of terrorist groups rather than only terrorist incidents, which is interesting in its own right. Appendix §2 shows that this result is not simply due to the onset of civil war by insurgents using terrorism as a tactic; the onset of civil leads to the formation of new terrorist groups.

Since it is difficult to interpret magnitudes from nonlinear models, Figure 3 presents the predicted probability that a state experiences the formation of a terrorist group in a given year across varying levels of democracy from model 1. These simulations show how increasing the value of democracy along the normalized Polity scale changes the predicted probability that a terrorist group is formed while holding other covariates constant at their mean values. As shown, the evidence further supports the curvilinear relationship between terrorism and democracy. Not only is the relationship concave, but there is a clear inverted u-shaped relationship. Countries are more likely to witness the emergence of terrorist groups as they democratize until they reach the center of the normalized Polity scale, after which the probability of terrorist group formation decreases. At the extreme of the Polity scale (0 and 1), there is a 0.006 probability that a terrorist group is formed. However, at the middle of the scale (0.51) the probability jumps to 0.014.\textsuperscript{20} While an approximate one percentage point increase may not appear substantial, it is worth noting that the baseline probability is extremely low since terrorist groups are formed in very

\textsuperscript{20}Gailbulloev, Piazza, and Sandler (2017) find their peak around 0.6. The lower peak here is expected, since the proportion of highly consolidated democracies is smaller in the historical period.
few country-years. The evidence for a curvilinear relationship between democracy and terrorism thus appears strong.

In short, the data presented here confirm an important and recent discovery in the terrorism literature. Yet, this analysis is a tentative demonstration for how the data are useful for terrorism scholars. Terrorist group formation is related not only to democracy, but also to other regime factors. For instance, a growing literature examines how institutional variation within democracies and autocracies influences terrorism (Aksoy et al. 2014; Li 2005; Wilson et al. 2013). It is anticipated that these data will prove useful for researchers seeking to better understand these relationships across time and space.

Conclusion

Quantitative terrorism research has expanded tremendously in recent years. However, temporal generalization is hampered by data limitations. Research on other forms of political violence reveals substantial temporal variation. For instance, the Cold War dramatically altered the nature of both civil and interstate war (Kalyvas et al. 2010; Senese et al. 2008, 257). It is likely that limited data availability means equally important long-term trends in terrorism are overlooked. The data presented in this article represent a necessary first step to testing important hypotheses over longer time periods than previously possible. The empirical analysis illustrates how these data can contribute to ongoing controversies in the terrorism literature. It finds support for the argument that the relationship between terrorism and democracy is curvilinear over a time period twice as long as examined in previous research. Future studies can use these data to test other important hypotheses. For instance, the body of scholarship on long-term waves of terrorism is almost entirely restricted to qualitative exploration. Similarly, these can be used to gain insight into the causes of terrorist group formation, group longevity, and the diffusion of terrorism as a modern form of political violence.

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