

# Terrorism, Democracy, and Credible Commitments<sup>1</sup>

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What explains the variation in terrorism within and across political regimes? We contend that terrorism is most likely to occur in contexts in which governments cannot credibly restrain themselves from abusing their power in the future. We consider a specific institutional arrangement, whether a state has an independent judiciary, and hypothesize that independent judiciaries make government commitments more credible, thereby providing less incentive for the use of terrorism. Using a recently released database that includes transnational and domestic terrorist events from 1970 to 1997, we estimate a set of statistical analyses appropriate for the challenges of terrorism data and then examine the robustness of the results. The results provide support for the credible commitment logic and offer insights into the different ways that political institutions increase or decrease terrorism.

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Most research on terrorism claims that domestic politics matters in explaining terrorism. Yet most existing research relies on a dichotomy between democratic and authoritarian regimes to capture the effects of domestic politics (for example, Li and Schaub 2004). Empirically, however, there is a great deal of variation within and across regimes. Some democracies, such as the United Kingdom, South Africa, or Colombia, experience more terror than others, such as Canada, Namibia, or Costa Rica. Some authoritarian regimes, such as Chile or Guatemala in the 1980s or Algeria in the 1990s, are more prone to terror than others, such as Cuba, Saudi Arabia, or Jordan. This raises the question: what explains the variation in terror within and across regimes? There is little research that attempts to unpack domestic political factors to understand the connections to terrorism. We contend that domestic political institutions shape the incentives of groups pursuing policy change, leading some to use terrorism and others to resort to different means.

Existing research connecting regime type to terrorism bears resemblance to many early explanations of war. According to Lake (2003:81), for many years,

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studies of war cast their explanations in terms of the “attributes of individuals, states, and systems that produced conflict,” whereas explanations now emphasize “violence as the product of private information problems of credible commitment, and issue indivisibilities. In this new approach, war is understood as a bargaining failure that leaves both sides worse off than if they had been able to negotiate an efficient solution.” Although the bargaining approach to war has its roots in Fearon (1995), it has not been confined to interstate wars. Instead, it is emerging as an explanation that has application in both interstate and intrastate wars (for example, Fearon 2004). The rationalist approach to understanding war has much to offer to the study of terrorism as well (Lake 2003).

In the context of terrorism, we consider credible commitment problems that groups face in assessing their future relations with the government (Fearon 1995; Lake and Rothchild 1998). Groups in all societies have policy goals, some more extreme than others, along with a variety of possible strategies to achieve those goals. Groups with extreme preferences are likely to opt for violence in pursuit of their goals more often than groups with moderate preferences (Lake 2002), especially when their rights cannot be guaranteed.

Groups pursuing extreme policy changes face a strategic dilemma: it is possible that pressing extreme policy change will result in a violent response from the government. Similar to bargaining theories of war, whether the government of a state can provide a credible commitment not to violate rights in the future, and to conduct its behavior through the formal political process, is a salient concern for extremist groups seeking policy change. Whether the group’s policy preferences will be considered might then be secondary to the group’s survival. Some political institutions can mitigate credible commitment problems by binding governments to respect the formal political process and allow diverse opportunities for groups to air their grievances, even when groups pursue extreme policy change. Put otherwise, even in the presence of extremism within the population, institutions can help mitigate the desire to turn to violence. Other institutions (or lack thereof) prevent governments from making this commitment to future restraint credible. When the political institutions do not constrain a government from repressing groups with extreme demands in the future, these same groups then have incentives to act outside of the formal political process.

Political institutions are an important part of an explanation of terrorism precisely because different institutions provide distinct strategic incentives for groups to pursue policy change. Both democracies and nondemocracies could have higher or lower levels of terrorism depending on how well their institutional arrangements make government commitments credible. We consider a specific institutional arrangement, whether a state has an independent judiciary, and hypothesize that independent judiciaries make government commitments more credible, thereby providing less incentive for groups to use terrorism. Without independent judiciaries, executives cannot credibly restrain themselves from future violations of rights. Thus, groups seeking to make extreme demands through a formal political process must assess whether the executive will resort to force. An independent judiciary offers some assurances about future government behavior in this situation.

We examine this credible commitment hypothesis using a new data set of all domestic and transnational terrorist events in 149 countries from 1970 to 1997 (LaFree and Dugan 2007).<sup>2</sup> The results indicate that independent judiciaries decrease the likelihood of terrorism, offering support for the credible commitment hypothesis. We also find that variation in terrorism exists both within and across regime type, although on average democracies have higher levels of

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<sup>2</sup> In the appendix, we also consider a related measure incorporating data for the years 1998–2004 and find similar results.

terrorism than autocracies. In addition to standard statistical tests and robustness checks, we use matching methods and demonstrate that our results are not dependent on any one model specification (Rosenbaum and Rubin 1983; Ho, Imai, King, and Stuart 2007).

Our findings have implications for several different literatures. They address the long-standing debate about whether democracy increases terrorism. We go beyond the aggregate emphasis on democracy as a correlate of terrorist behavior and instead flesh out the role of institutional factors that affect government commitments to their people. Our focus on institutional factors helps account for terrorist behavior in both types of regimes. The paper also contributes to a growing literature arguing that credible commitment problems plague international security situations (Fearon 1995; Lake 2003). We contend that commitment problems extend outside of the domain of civil and interstate wars to apply to terrorist behavior, and we present evidence consistent with this argument.<sup>3</sup>

### Terrorism and Its Explanations

We begin with a discussion of two important conceptual difficulties in extant scholarly work that are important for the credible commitment logic: the domain of terrorism and the domestic vs. transnational distinction. Following, we situate our credible commitment argument within the terrorism literature.

#### *Defining Terrorism*

Groups that engage in terrorism have goals to affect policy, sometimes to change it radically or sometimes to prevent what appears to be imminent changes. And yet there are many possible ways to affect public policy, terrorism being one of the least common forms. Typically, groups act through a formal political process. Sometimes people act outside of the formal political process, but in nonviolent ways. Still others use revolutionary violence to pursue their goals. Although over 200 definitions of terrorism exist (Silke 2003), there is an emerging consensus both in academic and in policy circles about the core meaning of the concept of terrorism. “Most agree that terrorism is a set of methods or strategies of combat rather than an identifiable ideology or movement, and that terrorism involves premeditated use of violence against (at least primarily) noncombatants in order to achieve a psychological effect of fear on others than the immediate targets” (Bjørge 2005:1–2).

Consistent with this emerging understanding, we define terrorism as *intentional violent acts carried out by nonstate actors against noncombatants with the purpose of effecting a political response*. We further refine our focus in a couple of ways. Shifting from perpetrators to targets, we confine our attention primarily to attacks against noncombatants, which includes civilian facilities such as airports and transportation infrastructure, but excludes any acts against police or military units.<sup>4</sup> Violence against civilians could occur on a sporadic basis as part of a low-level oppositional campaign. It could also occur as part of a more sustained struggle in which rebel groups use violence against civilians as they fight against the state (Humphreys and Weinstein 2006; Kalyvas 2006).

Based on the aforementioned definition, we assume that terrorism is a method or strategy to effect political change in a state. Others similarly argue that

<sup>3</sup> Of course, credible commitment issues apply in many other domains as significant work in economics demonstrates (for example, see North 1994).

<sup>4</sup> This, of course, raises the question of whether to consider attacks against the police or military when the state is not engaged in war (Bjørge 2005). We follow conventional wisdom in excluding this possibility, although our statistical results are very similar with and without police/military targets included.

terrorism is an intentional and strategic choice, not an unintended effect of psychological or social factors (Crenshaw 1990:8). Terrorism is often popularized in the media and, by some psychological approaches, as unintentional or non-strategic. Put differently, they consider terrorism “irrational”—behavior in which people participate because of uncontrollable psychological and social processes (Crenshaw 1990), rather than in the rational pursuit of their goals. Yet convincing arguments and evidence demonstrate that terrorist behavior is indeed a rational strategy to achieve a group’s goals (for example, Schelling 1966; Crenshaw 1981; Kydd and Walter 2002, 2006; Enders and Sandler 2006). It is plausible to suggest that suicide terrorism is individually irrational, because individuals derive no personal benefit, but even this obscures the fact that many families of suicide bombers are compensated well (Luft 2002). And most attacks occur in the context of a larger strategic interaction between a strong state and a weak opponent attempting to change the state’s policies (Pape 2003), which suggests terrorism is rational for the group as a whole. Hezbollah’s success in forcing the United States out of Lebanon illustrates the rationality of the strategy for the group. Doubtless, other groups learned from Hezbollah’s success in choosing to adopt suicide terrorism.

### **Domestic and Transnational Terrorism**

Equally important, but discussed far less than definitions and rationality assumptions, is the locus of terrorist activity. In the news it is frequently reported that terrorists are spreading out of the Middle East and South Asia with the goal of reaching Europe and the United States. Global terrorism, for many, is synonymous with Al Qaeda and Osama bin Laden. The supposedly unstoppable spread of global terror is substantiated in people’s minds because of high-profile events such as the attacks on the World Trade Center and Pentagon on September 11, 2001. Several thousand people lost their lives; many more began to fear that widespread and deadly attacks would originate abroad and quickly infiltrate their lives. The focus on global terrorism is not confined to the media. Scholarly work even highlights international networks of terror as a cause of violence across states (Deibert and Stein 2002; Sageman 2004), showing that terrorism tends to cluster in time and space (Midlarsky, Crenshaw, and Yoshida 1980; Braithwaite and Li 2007).

The focus on international networks of terror might be misleading, however, if it gives the impression that terrorism is primarily a *transnational* phenomenon. Two broad types of terrorism exist: transnational and domestic. The irony is that *transnational* terrorism—terrorist acts committed by one or more groups within one state against one or more groups from another state—is not the most frequent or deadly form of terrorism worldwide. *Domestic* terrorism—terrorist acts committed by one or more groups within one state against one or more groups also belonging to the same state—is both more frequent and deadly than transnational terrorism. Depending on the measure, domestic terrorism occurs between three and eight times more frequently than transnational terrorism (LaFree and Dugan 2007). Based on other data, Abadie (2006:50) notes that in 2003 there were six times as many domestic events as transnational. Between 1970 and 1997, further, the average number of deaths in transnational terror attacks was far lower than in domestic terror attacks (LaFree and Dugan 2007). Catastrophic transnational terrorist events, such as September 11, are exceedingly rare and have had little effect on the overall trend in terrorism over time (Enders and Sandler 2006). Even though transnational groups such as Al Qaeda are most frequently in the US news and national interest, a number of prominent domestic terrorist groups exist including Basque separatists (ETA) in Spain, Tamil Tigers (LTTE) in Sri Lanka, and Chechens in Russia. Pape (2003) contends that the Tamil Tigers in Sri Lanka are responsible for a plurality of suicide

terror attacks around the globe. Notwithstanding high-profile events such as the attack on the Prime Minister of India, most of these attacks have been domestic.<sup>5</sup>

Most work on terrorism focuses on either transnational terrorism explicitly (for example, see Li 2005; Enders and Sandler 2006) or terrorism generally, without distinguishing between the domestic and transnational realms. A notable exception is Asal and Rethemeyer (2008), who make a general argument and test it using data on both domestic and transnational terrorist events. Perhaps some of the confusion about the links between democracy and terrorism in the literature stems from the lack of disaggregation. The target of terror attacks, for example, may affect whether groups use domestic or transnational terrorism, especially because expectations about the likely effects of using terrorism to influence domestic, as opposed to transnational, audiences can differ dramatically.

Even if domestic terrorism is conceptually different from transnational terrorism, domestic terrorism could be a consequence of international processes beyond the control of individual groups and states. That is, domestic groups using terrorism against their own government might learn from terrorist groups in neighboring states and emulate their behavior. This behavior represents domestic terrorism but is only *indirectly* influenced by international processes. The Tamil Tigers in Sri Lanka, for example, might have learned about suicide bombings from abroad, but they used suicide bombings primarily in pursuing domestic political changes.

The *a priori* reasons for differentiating between domestic and transnational types of terror are mixed: it is possible they are different, but they could also be similar. In what follows, we examine the possibility that domestic and transnational terror follow different processes. Our main analysis examines domestic terrorism only, but then we carry out sensitivity analyses using the transnational terrorism data. Although not a central part of this essay, given the focus in the literature and media on transnational terrorism, we use a spatially, and temporally, lagged measure of domestic terrorism in other countries to test the possibility that the motivation and ability to engage in *domestic* terrorism diffuses from abroad.

### Theoretical and Empirical Approaches

The academic literature provides little guidance about the causes of domestic terrorism independent of transnational terrorism. Explanations for the uses of terrorism generally vary from structural factors to individual psychology, almost all of which share an emphasis on individual, group, and state *attributes* such as political, economic, or social factors (Smelser 2007:16). Research emphasizing political attributes deals extensively with whether democracy or autocracy promotes terrorism (Gross 1972; Pape 2003; Li 2005). There are a number of different logics underlying the democracy–terrorism connection, some of which are better developed than others. The spread of Western democratic culture is one potential motivation for groups to use terror (Smelser 2007:26), although it is more applicable to transnational terrorism. Others contend that democratic “occupiers”, such as Russia in Chechnya or Israel in the occupied territories, are “casualty averse,” and terrorism can be used to exploit this lack of resolve (Pape 2003). Also, democratic countries are arguably more likely to make policy changes and so terrorism is thought to be effective only in the democratic context (Pape 2003). Generally, the literature produces a number of conflicting results, but with the preponderance pointing to the possibility that terrorism is more likely in democracies (Li 2005).

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<sup>5</sup> According to the Global Terrorism Database (GTD), the country with the most domestic terror events is Colombia.

Although existing arguments point to a connection between democracy and terrorism, they can rely on rather indirect and nonintuitive logics. Almost all quantitative studies of terrorism use transnational data, and in order to test their arguments with transnational data, the theoretical logics can be complicated. They imply complicated causal chains such as that groups use terrorism in order to pressure their own governments, who then pressure a third-party state to enact some policy change, which might subsequently entail the third-party state requiring its own citizens or businesses to take certain steps. Violence against a third-party state, such as the bombing of US embassies in Africa, for example, communicates several messages to several audiences. Looking *only* at the structural characteristics of the United States or Kenya or Saudi Arabia may miss the dyadic or networked nature of the interaction.

While not all studies require such a causal chain, many do and they raise the question of whether some long and complex process is really indicative of why groups use terrorism in the first place. The logic is simpler if democratic countries occupy a region and terrorism is directed toward those democratic states (Pape 2003), but democratic occupation is the exception, not the norm, when considering terrorism generally. A simpler theoretical logic can be found in an examination of the connection between domestic political institutions and domestic terrorism. We now turn to our theoretical argument that emphasizes credible commitment problems in the domestic political context.<sup>6</sup>

### **Credible Commitments and the Choice (Not) to Use Terror**

Nonstate groups have preferences over state policy; only sometimes do their preferences align with the state's preferences. The goals of nonstate groups include securing limited political concessions, appropriating control of the government, or even secession. Nonstate groups employ a variety of strategies to attain their goals and those with extreme preferences are more likely to use violence to achieve their goals (Lake 2002). Whether or not groups use violence depends in part on the incentives that the state provides.

Nonstate groups that might use terrorism are comprised of individuals from the general public; thus, we differentiate between a dissident group, the public, and different levels within the state. Early attempts to model terrorism use two actors: the state and terror group (for example, Sandler, Tschirhart, and Cauley 1983). The omission of the public or some segment thereof is troublesome because "uncommitted" members of the public may be pushed toward supporting terror groups by the actions of the state (Siqueira and Sandler 2006:879). Incorporating this group into an argument over the interaction between states and terrorist groups can show how various choices by each actor lead to dissident mobilization or demobilization (Bueno de Mesquita and Dickson 2007). More recently, formal models have added the public or some subset of the public to

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<sup>6</sup> Because the focus of this study is on political institutions, we confine our discussion of economic and social factors to the following. Some economic and social attributes such as poverty could lead to economic deprivation, which breeds desperation and extreme responses (Arnold 1988; Smelser 2007). Others question the relationship and offer empirical evidence that economics does not play any discernable role (Atran 2003; Krueger and Malečková 2003; Abadie 2006), given that most terrorists are educated, well-off individuals. It is possible that poverty is a factor in generating potential recruits, but that terrorist organizations screen well and only accept a limited number of recruits (Bueno de Mesquita 2005). Other work argues that terrorism is a product of Islam specifically (e.g., Rapaport 1990; Stern 2003) and religion generally (Reich 1990; Juergensmeyer 2001), although there are those that question the religious factor (for e.g., Merari 2005). In some cases, it has been argued that the economic or religious grievances gel into ideologies that motivate groups to use terrorism (Hewitt 2002; Kydd and Walter 2002; Smelser 2007). In sum, there is considerable disagreement about the role of economic and social factors; we consider them only indirectly as control variables, but future research is still clearly needed to understand their roles more directly.

represent the support base for the terror group (Bueno de Mesquita 2005; Siqueira and Sandler 2006; Bueno de Mesquita and Dickson 2007).

Members of the public who join a dissident group differ from the general public as they tend to have more extreme preferences over policy outcomes. Victoroff (2005) suggests that the incentives for joining a group that uses terrorism may differ even for the leader and the foot soldier, although relative to the general public both leaders and foot soldiers are likely much more extreme on average. We assume that each member of a group shares a set of extreme policy preferences even though they may join violent groups for a variety of reasons (e.g., revenge, the desire to kill, money, glory). At the dissident group level, the group pursues common goals vis-à-vis the state. This simplification is reasonable when considering state–group interactions. It is likely unreasonable if one’s primary goal is to explain why individuals join such a group.

Like dissident groups, states are not always homogeneous actors. Different actors could vie for policy control within the state, the main divisions being the branches of government. In many circumstances, the executive branch is dominant. In other cases, a legislative branch could be the primary state actor. In cases where the judicial branch exercises a credible check on executive power, we contend that the outcome of the interactions between the state and the dissident group will be less violent.<sup>7</sup> The separation of powers could thus alter the incentive structure that shapes the actions of both states and extremist groups.

North, Summerhill, and Weingast (2000:27) indicate that “establishing credible commitments requires the creation of political institutions that alter the incentives of political officials so that it becomes in their interest to protect relevant citizen rights.” A credible commitment to limited government makes terrorism and other violent dissent less beneficial in comparison with formal, nonviolent political participation. Nonviolent interaction with the state is also less costly, as the regime not only tolerates, but honors, political participation through formal mechanisms. In particular, it offers a wider range of choices—not simply violence—for political contention (Tilly 2003). Importantly, for a commitment to be credible, a limit on government power needs to be self-enforcing (Weingast 1995). Institutions that credibly restrain the executive branch of government are most important, because the executive branch typically has the ability to control the means of coercion. Terrorism, therefore, is less likely in states that credibly commit to honoring the formal political process and respecting citizen rights than in states that cannot make such commitments.

Although most of the conflict bargaining literature highlights the need for credible commitments to avoid or end wars (Fearon 1995; Walter 2002; Powell 2006), precisely which institutions make commitments more credible is not well understood.<sup>8</sup> A number of political institutions could facilitate credible commitments, and we now turn to a discussion of one important institution— independent judiciaries.

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<sup>7</sup> Bueno de Mesquita and Dickson (2007), in their model, divide governments into two types: one that is concerned with the general welfare of their aggrieved population and one that is not. Using Bueno de Mesquita and Dickson’s (2007) terminology, putting checks on the executive could be one such way to signal the government’s *type*.

<sup>8</sup> One way to resolve any strategic dilemmas is to win the war, yet few wars end this way. If you cannot win the violent interaction, how can the commitment problem be solved? Fearon (2007:2) notes that while fighting often trumps bargaining, “a difficulty for commitment-problem explanations of protracted conflict is that such conflicts often do end with negotiated settlements.” How then can governments and violent dissidents bargain and trust that settlements will be respected? We do not investigate the uses of terrorism *during* negotiations and how this influences further uses of terrorism. This remains an open question.

### Restraining Political Institutions

In the context of terrorism specifically, a great deal of research contends that democracy is an important correlate of terror. With few exceptions (Li 2005), however, current research has not attempted to unpack what about democracy (or autocracy) encourages or discourages terrorism as opposed to other less violent or nonviolent forms of dissent. One important institutional feature of a regime is its ability to credibly restrain its own power to violate citizen's rights.

If we begin with the assumption that most state leaders want to amass as much power and resources as possible,<sup>9</sup> then once power has accrued leaders will find it difficult to provide protected avenues for dissent credibly.<sup>10</sup> This issue is a problem for all regimes, be they democracies or autocracies. Gandhi and Przeworski (2007) argue that even autocracies must provide institutional channels for dissent and at times provide policy concessions. Moreover, "policy compromises entail an institutional setting...[and] [i]f rulers counter...threat[s] with an adequate degree of institutionalization, they survive in power" (Gandhi and Przeworski 2007:1283). What institutional choices then can any regime, democratic or authoritarian, make to credibly refrain from using violence and thus incentivize extremists to avoid this action as well?

States that create independent judiciaries provide a limit on the power of the executive, the most likely agent of government violence (North and Weingast 1996; Smith 2008). As Staton and Reenock (2010:117) assert, rights enforced by "effective, independent judiciaries are designed to ensure that state promises to forgo financial predation and to respect the physical integrity of its subjects are perceived credible." In their study of seventeenth-century England, North and Weingast (1989:819) find that "the creation of a politically independent judiciary greatly expanded the government's ability credibly to promise to honor its agreements, that is, to bond itself. By limiting the ability of the government to renege on its agreements, the courts played a central role in assuring a commitment to secure rights."<sup>11</sup>

Independent judiciaries can constrain the actions of the executive and provide confidence to citizens to invest, contract with other citizens, and negotiate with the state. As Feld and Voigt (2003:498) argue, there are three general cases in which an independent judicial branch has importance for societal interactions: "in cases of conflict between citizens... in cases of conflict between government and the citizens... in cases of conflict between various government branches." The second case, conflict between the state and citizens, is important for understanding a citizen's resort to terrorist violence. Davenport (1996), for example, finds that states with independent judiciaries repress their citizens less than states without this institution. Because states are constraining their use of violence and credibly limiting their power, citizens may be as well.

If individuals with extreme preferences feel that they cannot pursue their policy goals and/or grievances in a formal institutional setting because the government might later crack down on them, they will turn to noninstitutional participation. Because of the extreme nature of their preferences, violence is more likely than it may be for moderates. Moderates have less reason to be concerned about a future government response, because the nature of their claims is less consequential to the government. Because independent judiciaries can

<sup>9</sup> This assumption underlies what people term the predatory theory of the state. See Levi (1988) for a prominent example.

<sup>10</sup> See Fearon (1998) for an argument consistent with this logic that relates to ethnic conflict.

<sup>11</sup> The more abstract concept underlying this commitment to rights is often referred to as rule of law. Helmke and Rosenbluth (2009) argue that judicial independence is not the only way to achieve the rule of law, but it is *a* way. Helmke and Rosenbluth (2009) suggest that developing citizen attitudes toward rights or a political culture that supports the rule of law is another way.

limit the power of the executive and credibly restrain state violence, thereby reducing the need for dissident violence, we offer the following hypothesis:

**Hypothesis 1:** *Terrorism is less likely in states that have an independent judiciary than in states without an independent judiciary.*

By setting up institutions, such as independent judiciaries, the state can create and maintain a formal political process that it honors. States can also rely on an ad hoc political process that individuals and groups cannot trust. North et al. (2000) claim that two ideal types of order exist: a consensual basis for order and an authoritarian one. Between these poles lie systems of order that mix characteristics of both types. Under the consensual basis for order, citizens select leaders and have other political rights associated with democracy and economic freedoms associated with market economies. Ideally, democratic governments provide credible limits to their authority that are self-enforcing (North et al. 2000:24). To sustain the consensual basis for order, citizens must agree on what to do if the state violates their rights, which typically involves seeking redress through official political channels. In addition, the stakes of the political game must be limited (Przeworski 1991). Otherwise, losing office becomes too costly and extremely contentious. Higher political stakes also increase the likelihood of “rent-seeking.” In other words, the greater the value of higher office, the more likely groups are to expend resources in attaining it (North et al. 2000:24). Under the authoritarian basis for order, the state has limited support from society and draws on a much smaller *winning coalition* (Buono de Mesquita et al. 2003). Because of their limited constituency, they cannot credibly restrict themselves from violating the rights of a large segment of society.

Lijphart (1999) offers a slightly different explanation for how institutions can be designed to mitigate violent conflict. Lijphart (1999:2) argues that the consensual democracies, or democracies whose “rules and institutions aim at broad participation in government and broad agreement on the policies that the government should pursue,” are better able to channel participation into nonviolent forms than more majoritarian systems. Similar to Lijphart (1999), we expect that where states are positioned to accommodate even some of the people with extreme preferences, there will be less violence by these groups.

Li (2005) empirically evaluates Lijphart’s claims in the context of transnational terrorism and finds that consensual (or proportional) systems do not have fewer terror events than autocracies but do have fewer than majoritarian systems. Electoral systems that encourage broad-based participation, then, are a competing hypothesis that could cast doubt on our claims. In contrast, we do not limit our focus to democracies because independent judiciaries also occur in autocracies.<sup>12</sup> Our claims are that certain institutions, regardless of regime type, can mitigate commitment problems and restrain violence.

Institutional choices, such as independent judiciaries, provide important incentives for using violent or nonviolent strategies to achieve policy goals. We also contend that the choice to use violence depends on how many citizens support the policy preferences of extremist groups. Where the public’s preferences are closer to the dissident group’s, we would claim the group receives more support, as opposed to the case where their preferences are closer to the state’s. Generally, the more authoritarian the state is, the less citizen support it will have. Where fewer people are necessary to ensure the leader’s survival, we expect that fewer people will support the regime (Buono de Mesquita et al. 2003). Instead, greater numbers of people will support extreme policy preferences vis-à-vis the

<sup>12</sup> Using a Polity score of six as the cut-off for democracies, 809 observations in the data are democracies with independent judiciaries. Autocracies with independent judiciaries occur 164 times in the data.

state's current policies. Because the state does not rely on mass support, institutions in authoritarian regimes are not designed to allow for meaningful political participation. In some cases, this encourages people to become dissidents by acting outside of the formal political process using violence. Authoritarian institutions, however, can be highly centralized and have strong militaries and secret police apparatuses, making dissident behavior potentially very costly. Thus, authoritarianism encourages extremism among the population, but the most authoritarian states can also keep extremism under control with an extensive secret police. This suggests that authoritarian states should experience some terrorism, but the more authoritarian the state, the less likely terrorism is to occur. In effect, states can credibly threaten to crack down on extremism through violence, because they have institutions in place to punish violations.

States in which most people are supportive of state policy should experience less political violence generally because these states have fewer extremists. Yet we know that some democracies have groups of people with extreme preferences and that extremism often results in violence, whereas other democratic states do not have such a large cadre of violent activists. It is possible that some democracies have less terrorism because they have more efficient militaries (Reiter and Stam 2002) that can deter the use of terrorist violence by threatening or carrying out state violence against such groups. The use of state military force could also induce more political violence as a backlash against the state. An alternative argument suggests that some democratic institutions allow policy preferences to be channeled through a formal political process, thereby reducing the need for violence. When institutions are self-enforcing, extreme individuals and groups can trust that the state will deal with their extreme preferences within the formal political process. That is, states should be far less likely to renege on their commitment to honoring the formal political process. This allows individuals and groups with extreme preferences to opt for nonviolent behavior rather than violence. When institutions do not allow preferences to be aired in a meaningful and secure way, extremists are likely to use violence to achieve their goals instead. This suggests that democracies that do not honor the formal political process should experience terrorism, but that the more democratic the state is, the less likely terrorism is to occur. Taken together, the discussion of highly authoritarian and highly democratic regimes suggests the following hypothesis:

**Hypothesis 2:** *Terrorism is less likely in high-democratic and high-authoritarian states than it is in low-democratic and low-authoritarian regimes.*

In contrast to high-authoritarian and high-democratic regimes, the distribution of citizen support in low-democratic or low-authoritarian ranges likely appears somewhat different. Because low-democratic and low-authoritarian regimes change so much, we use the term *transitional regimes* interchangeably with low-democratic and low-authoritarian.<sup>13</sup> In a transitional regime, some institutions are likely to break down and other new institutions emerge; in both cases, new rules for the political game are emerging, and it is possible that more people can participate in shaping the new government. After the fall of the Shah in Iran, for example, groups including Islamic extremists, merchants, and Marxists were involved in forming the new government (Milani 1994). In the near term, they coexisted, but violence between the groups quickly ignited and the more organized Islamicists were able to consolidate power violently. This suggests that

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<sup>13</sup> Clearly, a state could be either low-democratic or low-authoritarian permanently, but these cases are not the norm.

any government commitments to the people cannot be credible because the political system is in flux.

The credible commitment logic highlights the role of expectations about the future. Based on past or current actions, states could provide signals that they do not and will not respect the rights of citizens, however. Extant violence by the state could demonstrate that the state's likely future response to the pursuit of extreme policy change is violence rather than respect for rights. Thus, we might expect that groups learn from the violence and choose not to pursue extreme policy change through a formal political process. Although extending the credible commitment logic suggests that state violence will increase dissident violence, the opposite could be true: state violence could deter terrorists. That is, "terrorizing the terrorists" could lead to less future terrorism. Juergensmeyer (2001) identifies this possibility, for example, in his discussion of counterterror policy. As noted previously, authoritarian regimes might use violence effectively through extensive state police structures and democracies might be effective at threatening or carrying out overt violence that deters or prevents terrorist violence. Although the case of the United States deterring Libya's use of force in the 1980s is sometimes used to support the "terrorizing terrorists" argument, Juergensmeyer (2001) provides evidence that Libya actually increased terrorist violence after violent US action. Because expectations are mixed, we note the different possibilities and then explore them empirically below. In the next section, we discuss ways to empirically test the implications from our argument.

## Research Design

### *Data and Estimation*

Because our argument emphasizes terrorism used by domestic political actors to effect a change within their country, we use data on domestic terror events from the *Global Terrorism Database (GTD)*, v. 1.0 (LaFree and Dugan 2007). Most quantitative studies of terrorism use the *International Terrorism: Attributes of Terrorist Events* data set, but these data are inappropriate for our research question because they only include incidents of transnational terrorism. The GTD records approximately 34,000 domestic terror events worldwide from 1970 to 1997. Consistent with our definition of terrorism, we include only domestic terror events directed at nonmilitary targets.

The unit of analysis is the country-year, which is appropriate given our focus on domestic terrorism.<sup>14</sup> The analysis includes 149 countries considered members of the international system by the Correlates of War Project (2008). Unfortunately, the *GTD* data for the year 1993 are missing. Because other domestic terrorism data do not exist across countries and over time, we report the main results without the 1993 data. LaFree and Dugan (2007) report that they reconstructed marginal estimates for 1993, which we obtained. The results reported in the paper do not change qualitatively when we use the marginal estimates for 1993. Results using their 1993 marginals are reported in the online web appendix. Summary statistics for the dependent and independent variables are reported in Table 1.

The dependent variable is a count of domestic terrorist events in each country of the world for each year. There is considerable variance in the number of terrorist events across countries and over time, which suggests that a negative binomial model is more appropriate than a Poisson count model. However, a number of countries do not have any domestic terrorism at all, whereas other countries experience terrorism in some years, but none in other years.

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<sup>14</sup> Most studies of transnational terrorism also use the country-year, but arguably they should opt for a directed dyad analysis.

TABLE 1. Summary Statistics

<i>Variable</i>	<i>Mean</i>	<i>SD</i>
Terror events	8.221	30.704
Independent judiciary	0.294	0.456
Regime	-0.712	7.581
Regime <sup>2</sup>	57.963	30.447
Regime transition	0.023	0.153
Capabilities	0.006	0.019
Population	9.086	1.480
GDP	4.212	4.691
Spatial lag of terror	29.645	71.650

Because of this, a zero-inflated negative binomial (ZINB) is a potentially more appropriate statistical technique.<sup>15</sup> The drawback of the ZINB model is that the two-stage set-up is difficult to interpret and frequently produces results sensitive to the specification of variables. Because of this, we report the results of the negative binomial regressions in the paper but then estimate the ZINB with the baseline specification for comparison and report the results in the appendix. In the ZINB, we use the same set of covariates in both the inflate and count equations. To account for potential dependence within units over time, we estimate the model with standard errors clustered by country. Clustering by country produces robust standard errors generally and within each panel (Long and Freese 2006:86).

#### *Model Specification*

We briefly discuss the covariates used in our analysis here and include greater detail about their measurement and distributions in an online Appendix. The main covariates proxy for whether there is a credible commitment to respect people's rights and allow for formal political participation even if extreme goals are pursued. We use several different measures in our baseline model to capture the ability of states to make a credible commitment. We include a measure of whether a state has a judiciary independent of the executive or legislative branches (from Henisz 2002),<sup>16</sup> which captures whether the executive will need to answer to a judicial authority should it act outside the formal political process.<sup>17</sup> As discussed earlier, scholars have argued that judiciaries allow for

<sup>15</sup> According to Long and Freese (2006:394), the ZINB allows zero counts to be generated by two distinct processes. In the first process, an outcome of 0 occurs with probability of 1, whereas in the second process an outcome of 0 occurs, but there is nonetheless a positive probability of a non-zero count. For our purposes, this means that certain cases are never likely to have terrorism, whereas other cases are likely to have some terrorism, but could still experience periods without it. The ZINB is estimated in two stages: first, a logit or probit model estimates which type of zero the observation is (inflate equation), and then a negative binomial count model is weighted by the "not always zero" observations to produce estimates of the expected counts (count equation). It is important to note that in the first stage, the estimation captures the likelihood of being in the "always zero" category, which means that if the same variables are in both the inflate and count equations, they often have opposite signs. For example, if a given factor has a positive coefficient in the inflate equation, then it is *more* likely to produce observations that are always zero. Including that same variable in count equation would most likely return a negative coefficient, reflecting the idea that there is not a positive correlation between that factor and terrorism.

<sup>16</sup> Henisz (1999:354) argues that "[t]he existence of an independent judiciary gives citizens and firms an independent forum to which they can appeal arbitrary, capricious or self-serving rulings by the state and whose rulings they can have confidence will be enforced by that state." This argument comports well with our expectation that an independent judiciary can credibly commit a state to following through on implicit and explicit social contracts.

<sup>17</sup> We also considered a measure of independent judiciary from Tate and Keith (2007), and although the number of observations decreases substantially because of the temporal period, the results are similar to those reported for the Henisz (2002) measure.

government commitments to be more credible (for example, North and Weingast 1996; Smith 2008).

In addition to these more direct measures of credible commitments, we also consider a regime's level of democracy/autocracy (ranging from -10 to 10) in a country. To capture not only the levels but also any differences between low democracy and autocracy on the one hand and high democracy and autocracy on the other, we include a squared measure of the democracy/autocracy scale (ranging from 0 to 100). This allows us to understand whether terrorism is more likely in low democracies or low autocracies as opposed to the most autocratic and most democratic countries. A corpus of civil war studies have found an inverted U relationship between regime and onset of civil war (for example, Hegre, Ellingsen, Gates, and Gleditsch 2001; De Soysa 2002; Salehyan and Gleditsch 2006). Adding this squared term is consistent with these studies that find intermediate or inconsistent regimes are the most prone to political violence.

Next, a measure of regime transition captures whether the government in a country is in the midst of change that prevents it from honoring its commitments. Further, we also include a standard measure of capability (the *Composite Indicator of National Capabilities [CINC]*) to capture the effect of overall state strength. Presumably, the stronger the government, the better able it is to violate any commitments it has made to its people. And, consequently, terrorism becomes more likely as most groups will find it difficult to pursue alternative violent strategies. Additionally, we include controls for both population size and income.

Another concern is that international forces might be increasing terrorism. More specifically, terrorism in one state could be spilling over into another state. To control for potential spatial diffusion, we created a lagged measure for each country of its neighbors' terrorism counts. If terrorism primarily follows a diffusion process, then this measure should be positive and significant and should reduce the explanatory power of other domestic variables, including our measure of an independent judiciary.

A final concern is that terrorism in the present might be affected by past occurrences of terrorism. It is standard practice in models using time-series data with continuous dependent variables to include a lag of the dependent variable to model the past on the present values of this variable. As Brandt et al. (2000) and Brandt and Williams (2001) show, however, using a lag is inappropriate in event count time-series models. Because lagged counts can only be used to model an exponential growth pattern in the data, they cannot be used where truly dynamic processes are occurring. Visual inspection of terrorism counts for each country during the period 1970–1997 suggests that terrorism is not exponentially increasing. In fact, terrorism often goes up and then down, oscillates, or exhibits other trends.

Instead of using a lag, Li (2005) uses a log of average annual terrorism events to proxy a country's historical experience with terrorism. We used similar measures including a running average of past terror counts and an annual average measure. Both of these measures are positive and significant but do not change the results substantially. We do not use a lag in the reported models given Achen's (2000) concerns with using lags, even in the OLS context, and because of arguments in Brandt et al. (2000) and Brandt and Williams (2001). Following the baseline model, we employ alternative measures of the key variables to demonstrate that our results are not overly sensitive to a unique model specification (see Appendix). Finally, we also use matching methods to reduce dependence on the various assumptions embedded in the various statistical models, which we report after the main results.

## Results

Table 2 displays the results of three different specifications of the negative binomial regression models. First, our baseline model includes a measure of independent judiciary, regime, regime squared, regime transition, capabilities, population, GDP per capita, and a spatial lag. The second model includes measures of different electoral systems: proportional, majoritarian, and mixed systems.<sup>18</sup> The reference category is an authoritarian system, which is omitted from the model and thus absorbed in the intercept. The third model uses an alternative measure of regime and regime squared from Melton et al. (2008), who create a “unified democracy measure” that combines information from all of the major democracy measures.

For each model, we report the incidence rate ratio (IRR), which represents the increase or decrease of terrorist attacks given a one-unit increase in the explanatory covariate, and the standard error. For a dichotomous covariate, the IRR represents the relative rates of terrorist attacks for countries with a value of 1 relative to countries with a value of 0 for the covariate. An IRR of 1.0 indicates no change in terrorist attacks, an IRR that is greater than 1.0 signifies an increase in the expected counts, and an IRR smaller than 1.0 reflects a decrease in expected counts. We detail the results of our initial analysis in Table 2 and, in a separate online web appendix, report the analysis that directly considers the excessive zero counts.

The statistical results are consistent with Hypothesis 1. We find that the presence of an independent judiciary decreases the frequency of terrorist events. The IRR of 0.352 suggests a substantial decrease and is statistically significant at the 0.01 level. Although not conclusive, this offers initial support for our contention that independent judiciaries make commitments to the people more credible. We consider the independent judiciary result in more detail in subsequent sections.

Consistent with Hypothesis 2, terrorism is more likely to occur in low democracies and autocracies. We draw this inference by examining the coefficients of the linear polity term as well as the quadratic polity term. As Brambor, Clark, and Golder (2006) show, we cannot interpret these coefficients individually as they are *conditional* marginal effects. These coefficients taken together can tell us whether the quadratic curve slopes upwards or downwards and where the maximum or minimum point of the curve is (where the highest or lowest probability of terrorism occurs). In brief, the shape of the curve suggests a maximum possibility of terrorism when a state is a low democracy (at about 3 or 4 on the Polity scale). We show in more detail how to draw this inference in the appendix.

In other words, terrorism may be less likely in high democracies and high autocracies. States such as Sweden, Costa Rica, the Netherlands, and Australia have all had Polity scores of 10, (high democracy) for most of our sample and experience extremely little terror. Countries such as Saudi Arabia, Jordan, and Oman have all had polity scores of -10 (high autocratic) and rarely if ever experience terror events.<sup>19</sup>

This result generally supports Hypothesis 2 and is consistent with others who have suggested that terrorism is unlikely in strong totalitarian regimes (Smelser 2007:29–30). In contrast to Pape (2003), it seems that the *degree* of democracy matters as well rather than simply the absence or presence of this type of regime.

<sup>18</sup> We use measures from Li’s (2005) data set which uses Golder’s (2005) data on electoral systems. There are a series of dummies that indicate a proportional electoral system, a majoritarian system, a mixed system, and a non-democratic system. We exclude the nondemocratic system, and it is absorbed in the intercept.

<sup>19</sup> The Khobar Tower incident in 1996 was a notable exception. Of course, this attack was targeted at American interests.

TABLE 2. Estimation of the Effect of an Independent Judiciary on Domestic Terror Events Using Negative Binomial Regression Models, 1970–1997. The base model includes the standard set of control variables. The model reported in the second set of columns includes variables for proportional representation, majoritarian, and mixed electoral systems. The third column includes an alternative measure of democracy from Melton et al. (2008)

<i>Domestic Terror</i>	<i>Base model</i>			<i>With electoral system</i>			<i>With Alt. regime measure</i>		
	<i>IRR</i>	<i>SE</i>		<i>IRR</i>	<i>SE</i>		<i>IRR</i>	<i>SE</i>	
Independent judiciary	0.365**	0.099		0.359**	0.086		0.390**	0.103	
Regime	1.127**	0.018		1.065*	0.031		–	–	
Regime <sup>2</sup>	0.981**	0.005		0.976**	0.006		–	–	
Regime transition	2.011*	0.539		1.934**	0.474		1.672**	0.384	
Capabilities	0.000	0.001		0.003	0.021		0.000	0.002	
Population	1.968**	0.250		1.903**	0.246		1.941**	0.256	
GDP	1.086*	0.045		1.107**	0.044		1.034	0.039	
Spatial lag	1.007**	0.001		1.006**	0.001		1.009**	0.002	
Prop. Rep.	–	–		3.343*	1.653		–	–	
Majoritarian	–	–		1.982	1.315		–	–	
Mixed	–	–		3.317	2.331		–	–	
Regime (Unified)	–	–		–	–		1.888**	0.268	
Regime <sup>2</sup> (Unified)	–	–		–	–		0.004**	0.005	
	LRTEST	$\chi^2 = 250$		LRTEST	$\chi^2 = 301$		LRTEST	$\chi^2 = 188$	
	Obs = 3562	Countries = 149		Obs = 3164	Countries = 127		Obs = 3576	Countries = 149	

IRR, incidence rate ratio.

Significance levels : \*5%, \*\*1%.

Additionally, the effects are nonlinear and require an explanation that includes this empirical observation. In the following section we discuss the substantive interpretation of the linear and nonlinear effects.

We also find that when a regime is in transition that terror attacks are more likely. Despite leaders' best efforts to ensure stability, transitional periods create significant uncertainty. In periods of uncertainty, commitments cannot be credible. Additionally, terrorism is not any more likely in states that have a strong central government than in states with a weak central government. States with larger populations and higher GDP per capita are more likely to experience terrorism. While the population result is not surprising, the GDP per capita finding is. Past work has argued that poverty is unrelated to terrorism; we actually find that terrorism is more likely in countries with less poverty. The results are not robust across all specifications, but they do suggest a potential relationship between economics and terrorism. Finally, terrorism is more likely to occur when neighboring countries are also experiencing terrorism.

In the model with other regime characteristics, the results are generally very similar to the base model. We expected that proportional systems are better able to provide a credible commitment and thereby decrease the frequency of terrorist attacks. The results do not support this contention, however (see Table 2). It is possible that proportional electoral systems do encourage a credible commitment, but that credible commitments do not have the effect we expected. It is also possible that a measure of proportional electoral systems is not quite appropriate as it might need to be disaggregated.

Another distinction in democratic design is between a presidential and parliamentary systems.<sup>20</sup> While the former tends to have majoritarian electoral systems and the latter proportional systems, there is variance among these types of democracies. It may be expected that certain aspects of parliamentary systems should have a big impact on making commitments credible. For example, no-confidence votes to remove an executive might deter an executive from violating the formal political process, but votes of no confidence are only captured indirectly by the parliamentary measure. Data measuring actual votes of no confidence would possibly be a better proxy for a credible commitment. Yet even a measure of no-confidence votes would not be quite right as the effects of the no-confidence vote might depend on the party system. Arguably, a multiparty legislative coalition would be better able to remove the executive from power than a single majority party that chose the executive in the first place. Even in a presidential system, the more parties that exist in a legislature, the less likely it would be that the executive could violate commitments to the people, without facing some negative repercussions. Because of these possibilities, we revisited the statistical analysis and added a measure of the effective number of legislative parties based on Golder (2005). We found a negative effect on terrorist attacks that is significant at the 0.1 level, suggesting that a party system with multiple parties contributes to a government's ability to provide a credible commitment.<sup>21</sup>

The final negative binomial model that we examine includes different measures of regimes. Recent work by Vreeland (2008) raises doubts about the use of Polity in studies of civil war as the component of the index that measures regulation and competitiveness of participation changes depending on levels of violence. Other work finds that results using the Polity measures are inconsistent (Treier and Jackman 2008). We explore the robustness of our results given

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<sup>20</sup> We also estimated models with dummies for presidential, parliamentary, and mixed (dictatorship excluded). Both presidential and parliamentary systems are more likely to experience terror than dictatorships, but the difference between the two is small.

<sup>21</sup> Data availability for this measure is extremely limited—only 1300 observations, as opposed to more than 3,000 in the main analysis—and so these results are tentative.

different codings of democracy. In Table 2, we use point estimates from a new alternative measure of democracy from Melton et al. (2008) and find that the baseline model is largely unaffected by the inclusion of these new measures, and furthermore, some of the results become stronger, such as the regime and regime squared portions.<sup>22</sup>

The results of our analysis indicate that independent judiciaries have a pacifying effect on domestic terrorism, even controlling for other factors. To be sure the results are not sensitive to certain measures or model specifications, we conducted a series of additional robustness checks consisting of (i) including a lagged dependent variable in the model, (ii) adding the GTD's 1993 marginal estimates, (iii) including the 1998–2004 data, (iv) employing different measures of domestic and transnational terrorism, (v) including a lagged measure of state violence, (vi) estimating a zero-inflated negative binomial rather than the simple negative binomial, and (vii) using matching methods to reduce dependence on model assumptions. We report the results of the additional analyses in an online web appendix and briefly review the major findings here.

Despite Brandt et al. (2000) and Brandt and Williams's (2001) advice not to use a lagged dependent variable, we checked whether the independent judiciary result is sensitive to the inclusion of the lagged measure of terrorism and find that the independent judiciary result is still statistically significant at the 5% level, although the coefficient attenuates some. We then added the GTD's marginal estimates for the lost 1993 data and also included the 1998–2004 data in our analyses to lengthen the time in our analysis. In both cases, we find that the independent judiciary result remains negatively related to terrorism and is statistically significant. When we operationalize domestic terrorism differently, the results are qualitatively almost identical. We included a measure of transnational terrorism and found that the results are also similar to domestic terrorism, suggesting that domestic and transnational terrorism may follow similar causal processes. We follow up on this point both in the conclusion and in the appendix, as it is an especially important distinction for terrorism research. We added a measure of state violence, furthermore, to address the possibility that calculated state repression reduces the levels of terrorism, and find that the opposite occurs—the more state violence that occurs, the more frequently dissident terrorism occurs as well. Independent judiciaries continue to be associated with less terrorism, even controlling for state violence. Rather than rely solely on the negative binomial regression model, we estimated the results using a zero-inflated negative binomial and find that our baseline results on independent judiciaries are robust to this change in estimator. Finally, to ensure that our results are not dependent upon the assumptions of any particular model, we pre-process our data using a variety of matching procedures. After matching, we again estimate zero-inflated negative binomial and simple negative binomial models and find that independent judiciaries remain associated with fewer terror events.

### Conclusion

Terrorism is a frequent and persistent form of political behavior in contexts as diverse as Colombia, the United Kingdom, Russia, and Pakistan. We have argued that a common explanation underlies terrorist acts in democracies and authoritarian regimes alike and have emphasized the importance of examining

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<sup>22</sup> We also used a measure of Polity without this component and found similar results with the exception that capabilities and spatial lags of terror were not significant. We also tried an index that used Polity plus Vanhanen's (2000) participation measure. Results were similar to the revised Polity index mentioned previously. Using only Vanhanen's measures yielded some of the strongest results. Finally, we also employed the combined Freedom House index and found similar results to the revised Polity measure.

credible commitment problems, an important class of strategic dilemmas (Lake and Rothchild 1998). We argued that certain institutional arrangements, especially an independent judiciary, can help resolve strategic dilemmas between the state and violent opposition. Namely, if an independent judiciary exists, extremists can be less concerned about a strong crackdown by the government in the future.

In contrast to many studies that use data on transnational terror to evaluate arguments about state–opposition interactions, we use new data on terrorism throughout the world from 1970 to 1997 that includes domestic events. To show that our results are robust and not dependent on a particular model specification or assumptions embedded in the models, we estimate a series of models using alternative measures of terrorism and credible commitments, different time periods, and also employ matching methods to pre-process our data (Ho et al. 2007). The statistical analyses all provide substantial and robust support for the hypotheses, leading us to conclude that strategic dilemmas, such as commitment problems, are important determinants of terrorist behavior.

Because we use the GTD data, we are better able to support claims about the process of domestic terrorism. We did not find substantial differences, however, between the effects of an independent judiciary on domestic and transnational terrorism. It is possible that domestic and transnational terrorism are, in fact, fundamentally similar in this particular context. We would not expect domestic and transnational terrorism to follow similar causal processes, however, because “[m]ost attacks are domestic and, more importantly, [transnational] attacks are not a representative sample of all terrorist activity” (Sánchez-Cuenca and De la Calle 2009:37). We suspect that domestic and transnational terrorism are indeed different and contend that the similar finding in our analysis is an artifact of the data and statistical tests.

Transnational terrorism data and tests need to be refined in order to accurately understand the relationship between domestic and transnational terrorism. Namely, like other recent transnational terrorism studies, we used the standard country-year unit of analysis. Given that multiple nationalities are involved in transnational terrorism, directed dyads may need to be used instead, especially if the target of the terrorist act is separate from the state where the act occurred (Young and Findley 2010). In this case, information about institutions or other domestic factors in both states is necessary to evaluate arguments concerning transnational terrorism. Future theoretical and empirical work should consider more directly whether there exist differences between international and domestic terrorism. These differences may be applicable in varying contexts such as different samples of states or in unique time periods. If future work finds that meaningful differences do not exist, the large literature on transnational terrorism (for example, Sandler et al. 1983; Li 2005) may not need to set itself aside as a different area of study altogether. If meaningful differences are found, then attention should be focused on understanding the conditions under which this is the case.

Our study has implications for several research areas, such as the connection between democracy and terrorism (Li 2005) as well as more general conflict processes. Rationalist explanations for war (e.g., Fearon 1995) suggest that conflict is caused by commitment problems, information problems, and (possibly) issue indivisibilities. Our findings suggest that, at least in the context of terrorism, issue indivisibilities may not be as salient for conflict resolution. If creating institutions, such as independent judiciaries, mitigates conflict, then even indivisible issues like territory can be dealt with.

Most importantly, it suggests the need to understand better how government commitments affect the propensity for terrorism as a strategy for change. Both democracies and authoritarian regimes provide a diverse array of incentives for

political participation, and further research could be devoted to addressing which of these incentives contributes to credible commitments. Beyond looking at just cross-national variation in terrorism activities, we suspect that a particularly fruitful area of research could address commitment problems at local and regional levels within countries, such as those created by geographic and other local factors. Additionally, variation in party systems and electoral systems within larger states like India (Piazza 2009) could help unpack some of these difficult issues. At the other end, intergovernmental organizations or non-governmental organizations might also be able to contribute to making commitments more credible, which could have the effect of decreasing terrorism throughout the world.

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