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International Alliances and International Terrorism

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Abstract

Terrorism is an instrument for groups that cannot achieve their political goals legally. One important strategic function of terrorism is to weaken the government – either directly by attacking representatives or supporters of the government or indirectly by causing a political response, which is unpopular among the population. Often, however, political stability of the home government is buttressed by foreign powers. In this case, the terrorists can have a strategic interest in attacking nationals of these foreign countries. This paper analyzes this logic by looking at international alliances as a proxy for international support. If the friend of my enemy is my enemy, then terror entrepreneurs, which seek to overthrow their home country's government (the enemy), may find it attractive to target nationals of the foreign allies of their country (the friends of the enemy). Our theory predicts that attacking nationals of a foreign ally is particularly attractive if this ally is militarily more powerful than the home country. Moreover, the combined effect of alliance and relative power differentials becomes stronger the more democratic the ally and becomes weaker the more democratic the terrorists' home country. We find empirical support for our hypotheses in an analysis of a directed country dyad sample of international terrorism.

1.   Introduction

Why do terrorists from one country target nationals of another country? The fast growing literature on terrorism, which has focused on the root causes of terrorism (Abadie 2006), is surprisingly ill-equipped to answer this question. On a theoretical level, research has neglected the impact of links between the terrorists' home country and the victims' country on patterns of international terrorism. This has translated, on the empirical side, into studies that aggregate acts of terror at the country level (of the terrorists or the victims or the location of terror). These studies have generated insightful results. Yet, by design they are not capable of analyzing why terrorists from one country target nationals from *some* foreign countries, but not from others.[1]

Starting from the assumption that terror groups want to gain a significant political influence on their country of origin or the broader region (Crenshaw 1981, 2001; Pape 2003, 2005; Kydd and Walter 2006), terror groups should mainly attack domestic targets. However, some governments borrow strength from more powerful allied foreign powers. Citizens from countries that stabilize the government in the terrorists' home country may then become a derivative, strategic target of terror attacks. If the friend of my enemy is my enemy, then terrorist groups, which seek to overthrow their country's government (the "enemy"), will find it attractive to target nationals of the foreign supporters of their country (the "friends of the enemy").

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[1]   The only directed country dyad studies of terrorism we are aware of are Krueger and Laitin (2008) and Blomberg and Rosendorff (2006).

In this paper, we study one important way in which foreign support renders the nationals of the supporting country more vulnerable to becoming the victims of terrorism: international alliances. We argue that the incentive to inflict terror on nationals from the foreign ally becomes stronger if allies are militarily more capable than the home country. This interaction effect between alliance and relative difference in military capability is itself conditioned by the type of political regime in both of the allied countries. Specifically, the joint effect of alliance membership and power asymmetry becomes stronger the more democratic the foreign ally and the more autocratic the home country.

We test the hypotheses derived from our theory on pooled data from a directed country dyad sample, covering the period between 1968 and 2003. As predicted by our theory, the global patterns of international terrorism vary with co-membership in international alliances, where groups from the weaker ally are more likely to attack citizens from the stronger ally than vice versa. We also find that this joint effect of alliances and power asymmetries is amplified by an autocratic government in the terrorists' home country and a democratic government in the ally.

2. The Strategic Logic of Attacking Foreign Allies

This section develops a theory of the strategic logic of terrorism, international alliances, power asymmetries and democracy. We argue that attacking the *ally* of the home country's government rather than the government itself can be an attractive and at times optimal strategy for terrorist groups. Our theory distinguishes three main actors: the terrorist group (called the *terrorists*), the government of the terrorists' home country, which the group wants to fight and

ultimately overthrow (called the *home government*), and the government of the foreign ally of this home government (called the *ally*).

2.1   The Strategic Logic of Terrorism

Our theory starts from the premise that terrorist organizations strive for political power and control (Kydd and Walter 2006; Neumayer and Plümper 2009a, 2009b), either in a single country or, as is the case with al-Qaeda and other transnational terror networks (Asal et al. 2007), in several countries of a particular region or civilization.[2] Terrorism is an instrument for groups that cannot obtain this goal in a legal way – either because their country of interest is not a democracy or because they are too weak and unpopular to gain substantial votes, let alone get hold of government by winning elections (Enders and Sandler 2006).

Terrorist groups differ in size, resources, the degree of violence they accept, and – perhaps most importantly – their ideology. Rapoport (2003) and Shughart (2006) distinguish three overlapping "waves of modern terrorism" in the 20th century: Anti-colonial and ethno-nationalist terrorism, particularly dominant in the 1950s and 1960s, aimed at political independence from the colonial occupiers or secession for their ethnic kin. Radical left terrorists triggered a wave that swept over many developed and developing countries in the 1970s and 1980s. More recently, international terrorism became dominated by Islamic terror groups seeking to replace moderate governments in countries

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[2]   This assumption may not hold true for every single terror group, but the vast majority of them have political objectives.

with a predominantly Islamic population by a more radical version of Islamic rule. Importantly, stark ideological differences notwithstanding all terror groups aim at gaining political power and control in a country.

However, terrorism is poorly understood if one focuses exclusively on the long-term goals of the terrorist groups and ignores the strategic logic of terrorism. Since most terrorists are unable to reach their ultimate goals in the short-run, they need to focus first and foremost on two fundamental intermediate goals. On the one hand, they need to keep the group alive. On the other hand, the terror entrepreneurs need to gain power relative to the government they seek to overthrow. For terror entrepreneurs, a terror plot is beneficial if it increases the support of the terrorists amongst their peers and reduces the government's strength. Attacks often provide terror entrepreneurs with media attention, and thus with the opportunity to promote their propaganda and recruit new terror agents.

At the same time, if the terror entrepreneurs intend to weaken the government, the attack either needs to affect the government directly (e.g., by killing an important representative) or it must cause a political response, which is unpopular among the population and thus weakens the government indirectly. As Kydd and Walter (2006) argue, provoking a harsh anti-terror response can be perfectly rational for terrorists. Since terror attacks create a widespread notion of insecurity, the government is likely to invest more heavily in security policies. As a consequence, individual freedoms will be restricted and taxes or budget deficits will rise. Accordingly, the support for the government may decline even if the country's population does not back the terrorists. Moreover,

a harsh security response by the government aggravates grievances among the terror group's actual and potential supporters, which drives out more moderate voices and helps recruiting terror agents (Crenshaw 1981; Rosendorff and Sandler 2004). The terror entrepreneurs need to balance these strategic benefits from terrorism against the costs imposed on them by the governmental crackdown on terrorism.[3]

2.2   Foreign Alliances and Power Asymmetry

Since terror entrepreneurs seek to gain political influence and control in their own countries, their targeting of foreign nationals is not self-explanatory. Terror entrepreneurs from the home country are typically not interested in gaining political power and control in the allied country. In other words, attacking the ally is not the ultimate goal of the terrorists. However, attacking the ally can offer important advantages in achieving the terrorists' intermediate strategic goals.

Some governments only survive with the support of their foreign allies. In other words, it is sometimes not the military strength of the home government itself that provides the largest obstacle for the terrorists' bid for political power and control, but the military strength of the ally. The ally may, for example, station troops in the home country, it can provide military aid, arms, military training, political and economic support, and so on. The larger the power asymmetry between the foreign ally and the home country, the more dependent

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[3]   See Rosendorff and Sandler (2004), Bueno de Mesquita (2007), Bueno de Mesquita and Dickson (2007) and Powell (2007) for a formal modeling of governmental counter-terrorism.

the home government is on the military power of the ally and the more important therefore the ally becomes as an obstacle to the terrorists. The power asymmetry is starkest when the home government can only survive with the help of foreign troops stationed in the country (Pape 2005). In targeting the foreign ally, the terrorists hope to cause the ally's withdrawal and retreat from interfering in the affairs of the home country, thus weakening the government and increasing the terrorists' chances of success.

Allies can also become an attractive target of the terror group because for various reasons attacks on nationals of the ally may be more popular among the terrorists' peers and potential supporters. First, the presence of foreigners from the ally may be perceived as illegitimate: Foreign troops are seen as occupiers rather than allies, foreign businessmen as exploiters rather than as employers or business partners and foreign tourists as the thieves of cultural heritage rather than as a business opportunity. Again, this effect is likely to be strengthened by a large power asymmetry between the ally and the home country, as this creates widespread feelings of inferiority and humiliation among the native people.

Along similar lines, nationals of the ally are often a more attractive target because media attention increases when foreigners die in the attack. As we have already argued, media attention enables the terrorists to spread their propaganda more easily. More powerful countries will have more media corporations and will enjoy greater global media coverage, such that a larger power asymmetry between the ally and the home country again makes targeting the foreign ally more attractive to the terrorists.

2.3   The Conditioning Effect of Regime Type

Some scholars of terrorism have argued that democracies are more prone to suffer from terrorist attacks than autocratic regimes. Li (2005) and Enders and Sandler (2006), for example, state that civil rights and liberal homeland security policies make democracies more vulnerable and reduce the costs for terrorists. Democratic regimes should also be more responsive to the terrorists' demands, if only indirectly by being more responsive to the demands of a public terrified by the terrorist attacks, thus raising the expected benefits of terrorism (Kydd and Walter 2006: 62 and 80). The insecurity and fear generated by terror campaigns puts public pressure on democratically elected governments to either defeat the terrorists or, as this is often impossible, to provide some concessions to their political demands. Suicide terrorism is particularly capable of inflicting harm and death on virtually any target, civilian or not, and it is not surprising that, as Pape (2003: 344) notes, 'every suicide terrorist campaign since 1980 has been targeted against a state that had a democratic form of government'. About half of these campaigns resulted in major political concessions by the targeted democracies (Pape 2005). Finally, the greater press freedom in democracies ensures that the terrorists have a higher chance to propagate their ideology, when the attack is directed against targets in or from democratic countries.

Yet, a systemic perspective makes one important contribution to the analysis of democracy and terrorism: Terrorist attacks on nationals from Norway and Sweden are extremely rare, while attacks on American or British nationals are much more frequent despite all these countries sharing similar degrees of liberal democracy and press freedom. This empirical observation suggests that

civic freedoms do not 'cause' terrorism *per se.* Terror entrepreneurs are not just interested in targeting innocent citizens from democracies, but in the strategic value of targets. Citizens from some democracies offer far greater strategic benefits than citizens from other democracies. Analyzing democracy from this perspective renders the argument straightforward: a higher degree of democracy in the ally raises the likelihood of terrorists targeting citizens from the ally for any given level of power asymmetry between the government and the ally. It lowers the opportunity costs and increases the expected payoff to terror entrepreneurs of inflicting terror on nationals of the ally. This is because the more democratic the political regime in the ally country, the more pressure the ally government will experience from its public to withdraw support to the government from the terrorists' home country in order to escape further terror attacks. Gartzke and Gleditsch (2004) argue that democracies are less reliable allies than autocracies due to fickle public opinion and transient coalitions. Exactly for this reason, terror entrepreneurs can expect to gain more from targeting a democratic foreign ally than an autocratic one.

Along similar lines, regime type in the terrorists' home country will condition strategic reasons of terrorism as well. It can be argued that democracy can also have a pacifying effect as it raises the opportunity costs to terrorists by offering alternative, non-violent, means of conflict resolution (Schmid 1992; Li 2005), thus reducing terrorism. In democracies, individuals can form interest groups and parties to promote their political preferences and actively participate in political competition. Democracies are also likely to inflict fewer grievances on the terrorists' potential supporters exactly because they respect more civil

liberties and political rights, thus rendering it more difficult for terror entrepreneurs to recruit terror agents (Crenshaw 1981).

Yet, again, once we consider the systemic perspective toward international terrorism, the link between democracy in the home country and terrorism on targets from the foreign ally becomes straightforward. A higher level of democracy in the terrorists' home country may or may not discourage all forms of terrorism in this country. However, once we control for the direct impact of democracy in the home country, its conditioning effect on the joint effect of alliance and power asymmetry on terrorism against the foreign ally is unambiguously negative. C*eteris paribus*, the more democratic the home country, the less it pays the terrorists to target nationals of the foreign ally rather than nationals of the home country. In targeting their own nationals, the terror leaders hope that the domestic public will put pressure on the home government to accommodate some of the terrorists' demands and since democracies are more responsive to public demand, terror entrepreneurs expect a higher benefit from targeting nationals from the democratic home country rather than nationals from the ally. This holds true as long as one is willing to assume that the domestic public is less tolerant of harm inflicted on its own nationals than it is of harm inflicted on nationals from the foreign ally, which we think is highly plausible.

2.4   Hypotheses

While the micro-level of our theory has terror entrepreneurs and their agents as actors, it does not make predictions at the terror group level but rather at the dyadic country level: Terrorism against foreigners of a specific nationality

increase if the terror groups' country of origin has an alliance with a more powerful and more democratic foreign power. Accordingly, we derive from our theory hypotheses for the dyadic country macro-level and we will estimate our empirical model at this level. In sum, our theory allows us to derive two testable hypotheses: First, an alliance between a foreign country and the home country increases terrorism against nationals of the foreign ally the more the larger the military capability of the foreign ally relative to the capability of the terrorists' home country. Second, the joint effect of alliance and military power asymmetry on terrorism against nationals of the foreign ally is stronger the more democratic the political regime in the ally and is weaker the more democratic the political regime in the home country.

3.   Research Design

Most empirical studies of terrorism use a non-dyadic research design and aggregate either all terror acts perpetrated on a country's territory or all terror acts perpetrated by or suffered by a country's nationals. To test our hypotheses we need a *directed country dyad* design instead.

3.1.   Data and Operationalization

Terrorism is notoriously difficult to measure because clear-cut definitions that allow distinguishing terrorism from guerrilla warfare on the one hand (Sambanis 2008) and terrorism from ordinary crime on the other hand do not exist. We rely upon the most widely used dataset of international terrorism – the "International Terrorism: Attributes of Terrorist Events" (*Iterate*) data (Mickolus et al. 2003). According to *Iterate*, terrorism is "the use, or threat of

use, of anxiety-inducing, extra-normal violence for political purposes by any individual or group, whether acting for or in opposition to established governmental authority, when such action is intended to influence the attitudes and behavior of a target group wider than the immediate victims" (ibid.: 2). Accordingly, ordinary crime as well as violence for purposes other than political are explicitly excluded. Violence committed during international and civil wars is not coded as terrorism either. Thus, guerrilla attacks by rebel groups are not counted, unless they are targeted against civilians or the dependents of military personnel (Mickolus, Sandler and Murdock 1989: xii).

Importantly, the data set also excludes all terrorist acts, which are purely domestic. To qualify as international, a terrorist act must "through the nationality or foreign ties of its perpetrators, its location, the nature of its institutional or human victims, or the mechanics of its resolution, its ramifications transcend national boundaries" (Mickolus et al. 2003: 2). For our research, the limited comprehensiveness of the *Iterate* data set is unproblematic: our theory predicts an absolute increase in terrorist attacks on citizens from more powerful allied countries. True, it may well be that an increase in international terrorism reduces domestic terrorism (especially if extremist groups face binding resource constraints), but it may also be the case that changes in domestic terrorist activities are uncorrelated or even positively correlated with changes in international terrorist activities. Whichever is the case, this issue is of negligible importance here as our theory predicts an absolute increase in international terrorist activities as the relative military capability of the foreign ally increases.

Beyond this limit, *Iterate* provides a wealth of information on each terror incident. We use two pieces of information that allow us to create a directed country dyadic dependent variable: first, the nationality of the terrorists (the first nationality of terrorists in case more than one nationality is involved); and second, the nationality of the victims (again, the first nationality of victims in case nationals from several countries become victimized). We employ the annual sum of all terrorist incidents as our dependent variable, but our results are robust to counting only fatal incidents, i.e. incidents that led to the killing of one or more victims, as an alternative measure instead. The location of the terror incident as such does not matter. Thus, terrorists from country i might inflict terror on nationals from country j either in their home country i, or in country j or in some third country k. In all cases, terrorism is counted toward the directed dyad between i and j.

To avoid multiple counting, only the first nationality of the terrorists and the victims determines the origin and the target country of a terrorist act in the results reported below. This has the disadvantage that information on the second and third primary nationality of terrorists and victims, also coded in *Iterate*, is lost, but the vast majority of terrorist acts only involve one nationality of both terrorists and victims. Our results are robust to attributing terrorist acts to all the first three main nationalities of terrorists and victims simultaneously.

We have to deal with the additional complication that there are incidents in the *Iterate* dataset where the main nationality of the terrorists and the victims are the same. These cases do not necessarily constitute purely domestic

terrorism since some aspect of the incident other than the foreign nationality of the terrorists or victims, such as the incident's resolution for example, transcends national boundaries to qualify for its inclusion in the dataset. However, these are cases in which the distinction between international and domestic terrorism is often blurred. In other words, the *Iterate* data are noisy and there is inevitably some measurement error in what counts as international and domestic terrorism. Rather than eliminating these cases, we control for the measurement error they introduce by including a dummy variable for identical dyads (i.e., where the main nationality of the terrorists and the victims are the same). Our results remain robust if we do not include this dummy variable. The same is true for excluding the identical dyads from the sample. While these observations are therefore potentially problematic in principle, they do not affect our estimates much in practice.

Clearly, our operationalization decisions may introduce some measurement error into the data. For example, terror attacks do not always hit the intended victims. If, coincidentally, individuals of nations other than the targeted one become the major victims this means that our dependent variable is measured with error. Similarly, if transnational terror networks such as al-Qaeda draw from an international pool of terror agents (e.g., employing Yemenite agents in attacks on Americans in Saudi Arabia), then this similarly leads to measurement error. Since, however, it is difficult to see why this measurement error should be systematically correlated with the explanatory variables, we do not expect bias from the way we compute the dependent variable. The same holds true for the information that we lose. For example, we

do not consider the very few cases, for which *Iterate* does not provide information on the primary nationality of terrorists or victims. Again, there is no reason to assume that *Iterate* systematically under- or over-reports the nationality of terrorists when the victims are citizens of an allied country. We also decided to exclude terror acts involving Israeli terrorists or Israeli victims. This is because the Arab-Israel conflict is unique. However, our results are robust to including these terror acts in the estimations.

3.2. *Explanatory Variables*

Our main explanatory variables are alliance, military power and regime type. We use two data sources for coding alliances. One is the Correlates of War (COW) Formal Interstate Alliance Data Set (Gibler and Sarkees 2004). This is perhaps better known than the second source, the Alliance Treaty Obligations and Provisions (ATOP) project (Leeds 2005; Sprecher and Krause 2006). However, whereas COW provides data only up to 2000, ATOP alliance data are available to 2003. We measure alliance with a dummy variable that indicates whether two countries had entered into a formal alliance in the form of a defence pact with each other.[4] During the overlapping period, the two dummy

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[4]   ATOP differentiates in more detail among alliance types. For example, contrary to COW it also codes offense pacts. However, all alliances that include offense pacts also include defense pacts, so this makes no difference to our coding. Our results are robust toward additionally including non-aggression pacts (COW) or neutrality and non-aggression pacts (ATOP) as a weaker form of alliance between countries. So-called ententes (COW) or consultation pacts (ATOP) pledge

variables derived from each of our sources are very highly correlated with each other at r = .93. About 6.2 (COW) to 6.7 (ATOP) percent of dyad years in our sample are between allied countries.

In accordance with the conflict literature we measure military power by the widely used Composite Index of National Capacity (CINC) score, also taken from the Correlates of War project and pioneered by Singer, Bremer and Stukey (1972). A country's CINC score is a composite measure of its total population, urban population, iron and steel production, energy consumption, military personnel, and military expenditure. To measure the power differential between two countries, we divide the CINC score of the foreign country by the sum of CINC scores of the home and the foreign country. A higher value of this variable signifies increasing relative power of the foreign country relative to the home country and a value above 0.5 means that the foreign country is the more powerful of the two. Democracy is measured by the Polity project's *polity2* variable (Marshall, Jaggers and Gurr 2006), which runs from –10 to 10.

As additional variables, we include the log of per capita income, the level of democracy and the logged population size of both the terrorists' origin country and the victims' country. This follows arguments provided by Krueger and Laitin (2008) and Abadie (2006) on welfare and terrorism as well as the literature on democracy and terrorism discussed above. We also control for the population size of both countries to account for the simple fact that ceteris paribus more populous countries will generate more terrorism and suffer more

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nothing more than consultation and/or cooperation in crisis and are therefore excluded from the definition of alliance used here.

from terrorism. Data on income and population are taken from World Bank (2005). Lastly, we account for the fact that contiguity of two countries as well as geographical proximity lowers the costs for terrorists to execute terror acts against foreign nationals on the territory of the foreign country. The natural log of the distance between the capital cities of two countries and a dummy variable for contiguity by land or separation by sea of less than 150 miles are taken from Bennett and Stam (2005).[5] In a further robustness test, we included a variable measuring the number of nationals from the target country living in the terrorist country to capture the pool of available potential victims within easy reach, with data taken from Parsons et al. (2007). This variable is not well suited for panel as opposed to cross-sectional data. However, if included in the estimations it has the expected positive sign, leaving our main results unaffected.

3.3.   Estimation Method and Models

Our dependent variable is a count variable (number of terrorist incidents). The negative binomial is more reliable than the Poisson model, because our sample variance of the number of incidents exceeds its sample mean by factor 32. We therefore estimate negative binomial models with standard errors adjusted for clustering on country dyads, though the variation in incidents over time is large

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[5]   For lack of data, we cannot control for the amount and quality (Bueno de Mesquita 2007) of governmental counter-terrorist measures. However, insofar as these measures are correlated with per capita income, we control for them indirectly.

and clustering is of minor importance. We do not include year-specific time dummies, but our results are fully robust toward their inclusion. Our sample covers the period 1968 to 2003 and up to 150 countries. Due to missing data on the explanatory variables not all possible country dyads are included over the entire period. Approximately 0.5 percent of the dyads in our sample show terrorist activity. In robustness tests, we also estimate a so-called hurdle regression model to account for the dominance of values of zero in the sample.

4.   Results

In this section, we test our hypotheses. Before we present results from the regression analysis, we discuss two country cases and report some descriptive summary statistics to illustrate our theory.[6]

4.1   Illustrative evidence

The Philippines is a fairly dangerous country for foreigners. During the period 1968 to 2000, Philippine terrorists committed 173 terror incidents involving foreigners. This puts the country into the top decile of countries from which international terrorism emanates. Of these acts of terrorism, 111 involved nationals of the US, which is allied to the Philippines. This represents a large share, even if taking into account that US citizens are major victims of international terrorism globally. While the Philippines may illustrate how being allied to a foreign country can expose nationals of the foreign ally to an

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[6]   These refer to using the COW data for alliances, but are very similar if ATOP data are used instead.

enhanced risk of terrorism, it is also a somewhat unusual case because the US is its only foreign ally. If we want to get a sense of how power differentials between allies affect international terrorism, then clearly we need to look for a different case.

Colombia is a good candidate for illustrating our argument that there is not only an effect of international alliances on terrorism, but also that this effect is conditional on power differentials between the terrorists' home country and the country of the victims. Colombia has both allies that are more powerful and allies that are less powerful than herself. Colombian terrorists have been responsible for a large number of terrorist incidents (371) involving foreigners. 293 of these acts of terror involved nationals from allied countries (a share of 79 percent). Of the 85 country dyad years, in which Colombian terrorists targeted nationals from foreign allies, only 34 involved nationals from countries with a lower military capability than Colombia's. This is quite striking because in about 81 percent of country dyad years, Colombia is actually the more powerful country of the two allies. The United States alone, being just one out of many allies, but by far its militarily most capable one, accounts for 26 of the 85 country dyad years.

Our argument that the interaction effect between foreign alliance and power differentials is itself contingent on the level of democracy in both countries is, due to its complexity, rather difficult to illustrate with a case example. However, Colombia can again serve to shed some light on our argument. Colombia has been a democracy throughout the period of study, but its allies have not always been. The military power differential between

Colombia and its allies remains fairly stable over time, whereas the level of democracy shows modest change as some of its allies have experienced phases of autocratic regime. Out of the 713 country dyad years Colombia shares with foreign allies and for which we have data on the ally's level of democracy, 302 are with foreign autocracies.[7] Interestingly, then, only 17 out of 293 terrorist incidents involved an autocratic foreign ally.

Going beyond two specific case countries, next we briefly report some summary descriptive statistics that can further illustrate our argument. As mentioned already, about 6.2 percent of dyad years in our sample are made up of allied countries. Yet, 35.5 percent of incidents are associated with these dyad years of allied countries. Of those terror attacks targeted at nationals from foreign allies, 85.8 percent of incidents involve nationals from foreign allies that are more powerful than the home country of the terrorists. Of these, 72 percent of incidents involve nationals from more powerful foreign allies that are also more democratic than the home country of the terrorists. Figure 1 displays this information graphically. It demonstrates how acts of international terrorism are concentrated on nationals from militarily more powerful allies and, particularly so, if these are more democratic than the terrorists' home country.

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[7]   We chose 6 as the cut-off point, such that a polity value of 5 represents the most democratic autocracies and a value of 6 the least democratic democracies.
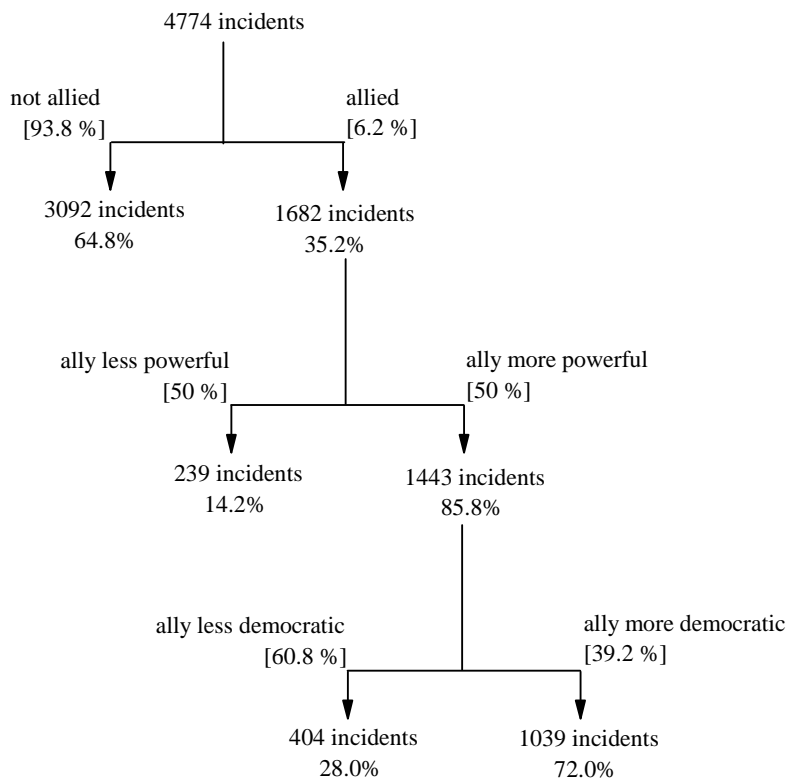
Figure 1: Terrorist incidents and international alliances, power differentials, and regime types

Both figure 1 and the two country cases support our theory. However, neither of them controls for alternative explanations for international terrorism. Results, thus, may easily be spurious.

4.2 Multivariate regression analysis

As we have argued above, the effect of alliances on terrorism against the foreign ally's nationals is contingent on the relative military capabilities of the foreign ally compared to the home country, and on the level of democracy in both countries. We approach these double contingencies by estimating two model types: In models 1 and 3 we are solely interested in the joint effect of alliance membership and power asymmetries. Models 2 and 4 interact this joint effect of

alliances and power asymmetries further with the level of democracy in both countries. The specification of these two models mirrors those used in Franzese (1999, 2003). In short, we first estimate the joint effect of alliances and power asymmetry. We then compute the vector of this joint effect and interact it with democracy in both the ally and the terrorists' home country.[8] Models 1 and 2 on the one hand and models 3 and 4 on the other differ only with respect to the operationalization of alliances. Models 1 and 2 use the COW data, models 3 and 4 the ATOP data. Table 1 reports regression results.

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[8]   In Plümper and Neumayer (2008), we formally derive this model specification.

Table 1: Negative binomial estimates of international terrorist incidents.

	model 1	model 2	model 3	model 4
Operationalization of Alliance Variable	COW		ATOP	
ln population of terrorists' home country	0.5069 (0.0579) ***	0.5064 (0.0280) ***	0.5053 (0.0571) ***	0.5010 (0.0273) ***
ln population of targeted country	0.6404 (0.0543) ***	0.6355 (0.0381) ***	0.6443 (0.0545) ***	0.6386 (0.0358) ***
ln gdppc of terrorists' home country	0.0089 (0.0413)	-0.0029 (0.0343)	0.0098 (0.0398)	0.0015 (0.0341)
ln gdppc of targeted country	0.6884 (0.0460) ***	0.6948 (0.0409) ***	0.6924 (0.0449) ***	0.6985 (0.0392) ***
democracy in terrorists' home country	-0.0127 (0.0069) *	0.0023 (0.0088)	-0.0222 (0.0070) ***	-0.0118 (0.0086) *
democracy in target country	0.0097 (0.0088)	-0.0026 (0.0109)	0.0063 (0.0087)	-0.0050 (0.0103)
contiguity	0.3206 (0.3223)	0.3140 (0.3181)	0.4690 (0.3064)	0.4545 (0.3028)
identical dyad	2.8470 (0.4289) ***	2.7795 (0.4132) ***	3.0752 (0.4251) ***	2.9807 (0.4080) ***
ln distance	-0.2761 (0.0477) ***	-0.2815 (0.0462) ***	-0.2474 (0.0468) ***	-0.2549 (0.0453) ***
joint membership in alliance	0.6660 (0.3303) *		0.6612 (0.3342) *	
relative military strength of target country	0.3127 (0.4273)		0.2512 (0.4291)	
alliance * relative military strength of ally	1.1209 (0.4177) **		1.2096 (0.4089) **	
vector from grey-shaded variables of model 1		0.8936 (0.1170) ***		0.8688 (0.1132) ***
vector * democracy (terrorists)		-0.0352 (0.0092) ***		-0.0266 (0.0087) **
vector * democracy (target)		0.0351 (0.0138) *		0.0331 (0.0131) *
intercept	-28.5704 (1.0587) ***	-28.3355 (1.0270) ***	-28.9598 (0.9879) ***	-28.6752 (0.9537) ***
ln alpha	2.8352 (0.1205) ***	2.8103 (0.1212) ***	2.8723 (0.1196) ***	2.8509 (0.1196) ***
N obs.	484,729	484,729	547,828	547,828
Wald chi²	1960.05 ***	1978.13 ***	2081.09 ***	2094.00 ***
-ll	12995.55	12976.25	13690.49	13675.31
Pseudo-R²	0.256	0.257	0.256	0.257

Standard errors clustered on country dyads in parentheses, * p(z)<0.1 ** p(z)<0.01 *** p(z)<0.001

Before we come to our variables of main interest and thus to our hypotheses, let us briefly discuss results on the control variables. As expected, both size and geography matter for terrorism in dyads of countries. The population size of the target country has a slightly larger effect on terrorist activity than the population size of the terrorists' home country. Distance also matters. The number of terrorist incidents declines in geographical distance between the origin and the potential target country. Neighborhood effects as measured by contiguity, which

tend to have a strong impact on militarized conflict between countries, are insignificant, however, once we control for distance.

The effect of per capita income in origin countries on terrorism remains controversial in the literature (see Krueger and Malecková 2003 for an insightful review). Our results lend some support to those who do not believe that terrorism originates in poverty (Piazza 2006). One has to keep in mind, however, that our results report the effect of a country's average income on international terrorist activity. Any inferences back to the motivation of individual terrorists necessarily suffer from environmental fallacy.

Our findings provide little support for an unconditional effect of democracy in the target country on terrorist activities. This can be seen from the statistically insignificant coefficients for this variable in models 1 and 3, in which democracy is not interacted with another variable. As concerns democracy in the terrorists' home country, the unconditional effect on incidents is significant in models 1 and 3, suggesting that more democratic countries produce fewer international terrorist attacks.

Turning to our variables of main interest, the correct interpretation of the results reported in table 1 is rendered very difficult by the non-linearity of the negative binomial regression model. In a linear model, the hypothesis that the effect of one independent variable on the dependent variable depends on another explanatory variable can be easily tested by a t-test of the estimated coefficient of the interaction term (Kam and Franzese 2007: 50). If this were a linear model, then results from models 1 and 3 on the coefficient of the interaction between alliance and relative military strength of the ally would

indeed suggest that joint membership in an alliance exerts a statistically significantly stronger effect on the number of terrorist incidents the higher the relative power differentials between the two countries, in accordance with our first hypothesis. Similarly, the results for the interacted variables from models 2 and 4 would suggest that the combined effect of alliance and power differentials becomes significantly weaker the more democratic the terrorists' home country and significantly stronger the more democratic the target country, in line with our second hypothesis.

Unfortunately, this easy way of testing the statistical significance of an interaction effect no longer applies when the model is non-linear. As Ai and Norton (2003: 129) have shown, in nonlinear models "the interaction effect (…) cannot be evaluated simply by looking at the sign, magnitude, or statistical significance of the coefficient of the interaction term." Instead, the interpretation of the interaction term requires computing the cross derivative of the expected value of the dependent variable, which depends on all the covariates in the model and their values. Testing the significance of interaction terms in non-linear models is thus an extremely complex task and in Plümper and Neumayer (2008), the working paper version of this article, we explain in detail how we have dealt with this problem. In brief, we find broad support for the existence of a significant interaction effect unless the values of the control variables render terrorism extremely unlikely.

4.3.   Effect strengths

We now turn to evaluating the substantive effect of our main variables of interest. Table 2 reports the predicted joint effects of alliance membership and

power differential for a range of values of relative military strength of the target country, based on estimation results from model 1.[9] The reported values are percentage changes in the predicted count of terrorist incidents relative to a chosen reference category in which both countries are equally powerful and share no alliance with each other (controls are kept at their sample means). The presence of an alliance increases the predicted count strongly and the more so the larger the power differential.

Table 2. Predicted Joint Effect of Power Difference and Alliance.

		non allied dyad	allied dyad
	0.1	-11.4	92.4
relative military	0.3	-6.3	157.0
strength of	0.5	0.0	241.8
target country	0.7	6.3	355.7
	0.9	13.9	507.6

Note: Percentage change in predicted count of terrorist incidents relative to base category (no alliance, relative military strength 0.5, all control variables at mean values). Estimates based on model 1.

Being based on model 1, these predicted joint effects do not yet take into account the conditioning effect of democracy in the terrorists' home country and the target country. Table 3 therefore shows the predicted joint effect of alliance membership, power differential and democracy for a range of relevant values, based on estimation results from model 2.[10] Similar to table 4, we report these

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[9]   Effects are substantively identical for model 3.

[10]   Effects are substantively identical for model 4.

effects as a percentage change relative to a chosen base category in which, as before, the two countries are not allied and are equally powerful and, in addition now, they are also equally democratic. All other variables are held at their sample mean.

Looking at the predicted joint effects for dyads that are not allied with each other, it becomes apparent that even a very large military power differential value of 0.9 together with the largest possible difference in democracy score between the target and the terrorists' home country (20) increases the expected count of terrorist attacks by only 29.6 percent relative to our base category. This contrasts starkly with the predicted joint effects for when the two dyads are allied with each other. If the two countries are equally powerful and equally democratic, the existence of an alliance raises the expected count almost twofold relative to the base category in which both countries are also equally powerful and democratic, but not allied with each other. Our estimates suggest that the effect of alliances *ceteris paribus* becomes much more pronounced if the foreign ally is more powerful than the terrorists' home country. The same occurs if the ally's level of democracy drastically exceeds the democracy level of the terrorists' home country. On the other hand, if the terrorists' home country is very democratic whereas the foreign ally is very autocratic, then the effect of alliance on terror against citizens of the foreign ally becomes small, even for large power differentials. We therefore conclude here that not only do alliances, power asymmetries and the level of democracy in both of the allied countries exert a statistically significant, but also a

substantively large influence on the change in the expected number of terrorist attacks.

Table 3. Predicted Joint Effect of Democracy, Power Difference and Alliance.

| | | non-allied dyads | | | | | allied dyads | | | | |
| | | democracy difference between target country and terrorists' country | | | | | democracy difference between target country and terrorists' country | | | | |
		-20	-10	0	10	20	-20	-10	0	10	20
relative military	0.1	-8.6	-9.3	-10.7	-11.6	-13.6	6.2	38.3	79.3	132.7	201.2
strength of	0.5	-6.2	-3.1	0.0	3.1	6.2	18.5	88.3	199.2	374.1	653.1
target country	0.9	-3.7	3.7	11.9	20.4	29.6	32.1	157.4	399.6	866.7	1781.5

Note: Percentage change in predicted count of terrorist incidents relative to base category (no alliance, relative military strength 0.5 and no difference in democracy between target and terrorists' home, all control variables at mean values). Estimates based on model 2.

4.4   Robustness tests

Our results are robust toward various modifications to the design of our empirical analysis. We have mentioned already that, for example, they are robust toward counting more than one nationality of terrorists and victims simultaneously, toward several ways of dealing with observations in which the terrorists and their victims share the same nationality and toward the exclusion or inclusion of Israel in the estimations.

In addition, we analyzed the effects of excluding the somewhat special case of anti-American terrorism from the sample. Americans are major victims of international terrorism (see Author 2007b). The US is also the militarily strongest country in the world, with many international alliances and the highest possible level of democracy on the Polity scale. Hence, one might be concerned whether our results are driven by terror victims from a single country. We therefore re-ran models 2 and 4 on a sample that excludes the US as a target of terror to explore whether our estimation results hinge on this one special case. We find it does not.

We conducted another robustness test to address the fact that international terrorism is a relatively rare event and some dyad years are much more likely to experience any such terrorism than others. To account for the fact that our dependent variable has a large number of zeros, we also estimated all models with what is known as a hurdle model. The hurdle model combines a binary model to predict values of zero with another model to predict non-zero

values.[11] Its underlying assumption is that different mechanisms account for zeros than for the distribution of non-zeros. We doubt whether this estimation procedure is consistent with the processes that generate international terrorism, but we prefer hurdle models to the zero-inflated negative binomial alternative since this latter model rests on even less tenable assumptions. It assumes that some dyad years do not experience international terrorism with probability of one (Long and Freese 2006: ch. 8) – which seems to be inconsistent with empirical evidence and for which there is no obvious theoretical justification either. In re-estimating models 2 and 4 with the hurdle model we found that all the variables of interest to our theory affect the first binary part with coefficients that are identical in coefficient sign to the coefficients we get in the negative binomial estimations and are also statistically significant. With one exception, the same is true for the second part.

5.   Conclusion

Like all international conflicts, patterns of terrorism are influenced by international relations between countries and their interaction with domestic political conditions. We have analyzed how the presence of an international alliance in combination with power differentials between the two countries

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[11]   For the first part, we used a logit estimator and a geometric estimator for the second part as the negative binomial estimator failed to converge for this part. The geometric regression is a special case of the negative binomial and well suited as a simpler alternative to the negative binomial when the count of the dependent variable diminishes in a smooth decreasing manner (Hilbe 2007: 138). The data we analyze satisfies this condition.

affects terror inflicted by terrorists of one of the allied countries on nationals of the other one and how this effect is dependent on regime type in both countries. The military ties between countries influence the strategic calculation of terrorists. Hitting targets from more powerful allies is especially beneficial for terrorists in the weaker of the allied countries.

Our empirical estimations lend ample support to our theory. Military alliances expose nationals of the foreign ally to an increased risk of terrorism from the home country and the more so the more powerful the foreign ally is relative to the home country. A higher level of democracy in the political regime of the foreign ally increases the joint effect of foreign alliance and power differentials further, while, conversely, a higher level of democracy in the home country reduces the strength of the interaction effect as the terror entrepreneurs' strategic interest shifts away from targeting citizens of the foreign ally and toward the benefits of targeting nationals from the terrorists' home country.

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