Ethnonational Terrorism:

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Abstract

Theories abound on why individuals become terrorists. However, looking solely at state- and group-level factors, purely quantitative work is scarce. This study seeks to begin filling the gap by examining why some ethnonational groups resort to terrorist tactics while others do not in terms of three factors: group cohesion, state freedom and wealth, and economic differentials.

Using data from Minorities at Risk, Polity IV, and the World Bank, and examining the years between 1985 and 2000, complementary log-log GEE regression with an AR1 correlation structure was used to determine which of those factors performed satisfactorily as predictors.

Group concentration, economic differentials, state wealth, and level of democracy in the state all performed well as predictors, whereas historic autonomy and language differences did not. While all three groups of factors demonstrated some ability as general predictors, economic differentials and levels of democracy did best in terms of both significance and in terms of ability of the state to alter them.

Nationalist feelings have often led to violence against the rulers of the nation. Wars of national independence have been fought from time immemorial: the Egyptians against the Ottoman Empire, the French against England, and the Serbs against the Austro-Hungarian Empire are just a few examples of nations fighting for their separation from the greater state. These three examples have one thing in common when seen through the lens of time: they all eventually

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involved great uprisings of the subdued nation against the occupying power. Not always is this the case, however.

More frequently today, nationalist struggles that do take on violence as a *modus operandi* tend to do so on a much smaller scale. Secessionist movements often have great difficulty in gathering the needed *matériel* to equip an effective army to fight for independence from the state. Battles for independence now tend to take place in the halls of state legislatures (hopefully) and on the streets in small-scale – almost micro-scale – uprisings (far too often). The Corsicans, the Basques, and the Ulster Catholics are three examples of ethnonationalist movements who took their fights for independence to the streets, ultimately resorting to terrorist tactics in an attempt to achieve their nationalist ends. Few, if any, citizens actually prefer the use of terrorism to the use of established political institutions and negotiations. The Basque Fatherland and Freedom movement alone has taken the lives of over 750 people, with a significant portion being civilians.\(^1\)

These ethnonations are not rare either. Richard Muir (1997) lists eleven non-state nations attached to specific pieces of land in Europe alone. These nations range in familiarity from the Scots and the Corsicans to the lesser-known Jurassiens and Savoyards. Each of these eleven nations has some history as a separate nation and a growing sense of nationalism at odds with their containing state. Each one of these nations has the potential, at least, to drive for independence using terrorist tactics. Again, this is just Europe. To date, only three European nations are well-known for terror: the Basques, the Corsicans, and the Ulster Catholics. Why is this?

Researchers have carried out many studies trying to determine why individuals turn to terrorism. Both Reich (1998) and Kegley (2003) devote an entire volume on micro-level causes of terrorism. They, and others, have concluded that individuals turn to the use of terror when they are unheard by the government, when their ideology is termed radical, and when they reach a certain level of frustration (Rudolph and Thompson 1985; Sederberg 1989; Zariski 1989). Few studies have been done at the state level, however. So, this study is being undertaken to allow us to be able to increase our predictive ability and understanding at the national and state level to determine which states are at risk from which nationalist groups resorting to terrorist tactics to achieve their political goals in terms of three factors - feelings of nationhood, economic differentials, and state strength.

\(^1\)However, more than just a few of those 750 targeted were state officials – including Franco’s heir apparent, Admiral Luis Carrero Blanco, and, more recently, councilors Miguel Angel Blanco and Manuel Zamarreno (ICT Online 2005).
1 Terrorism

Whenever discussing terrorism, priority must be given to defining terrorism; political scientists, sociologists, politicians, and journalists have proposed, and used, a multitude of definitions. There is little agreement within the disciplines, even less among them.

Both politicians and the media are well known for using language as a tool to evoke desired responses. In doing this, they shape the arena of discussion about a topic. They may even be able to completely eliminate any realistic public discussion about it. No one in public life debates the relative merits of terrorism and terrorist activities; anything labeled ‘terrorism’ is automatically equated with evil. Unfortunately, there is a problem with this - the freedom fighter. Many state foreign policies encourage nationalist uprisings in non-allied states. Those nationalists are both termed terrorists and freedom fighters, depending on the side describing the group. Were the Contras freedom fighters or terrorists? What about the Basques? Or the Kurds? The answer is yes. One man’s terrorist can be another man’s freedom fighter. Once this conflation of the terms occurs, however, rational debate seems to disappear; any discussion tends to reduce itself to a ‘point of view’ argument (Bonanate 1979; Rosand 2003). Fortunately, social scientists do continue studying terrorism. Note the change of emphasis between these last two sentences, from the actor to the act. This shift helps remove this discussion from mere rhetoric to something that can be more fruitful (Sederberg 1995).

Creating a universally-accepted definition for terrorism, however, is not simple. In fact, it may merely be an exercise in intellectual onanism. Yet, there are just three primary components of terrorism: methods, targets, and motivation.\(^2\) A good definition deals with all three components.

1.1 Terrorist Methods

The methods employed by most terrorists are used as one of the aspects of the line of demarcation between terrorism and not-terrorism. The US Department of Defense defines terrorism as “the unlawful use of - or threatened use of - force or violence against individuals or property to coerce or intimidate governments or societies, often to achieve political, religious, or ideological objectives” (Hoffman 2004: 19). The definition employed by the FBI is similar in emphasis, but adds a clause about the legality of actions: terrorism is any “violent or dangerous acts that would be crimes if committed in the United States and that appear to be intended to intimidate or coerce a civilian population or to influence the

\(^2\)Schmid determined that there were over twenty dimensions to terrorism definitions stretching back to the early twentieth century. However, he agrees that these three tend to be the most popular (Schmid 1983).
Beyond the law, there are certain methods that are more in step with terrorism than others. Car bombs are the quintessential tool employed by terrorists. What makes a car bomb a weapon of terror is that they are indiscriminate: they kill everyone in the vicinity, not just specific targets. Although Just War Theory only governs wars between states, it maintains that “indiscriminate killing of the population of the ‘enemy’ is wrong. No gratuitous or unnecessary harm may be caused” (Bluth 1987: 17). Thus, in accord with this line of research (Sederberg 1989), this paper holds that a terrorist tactic is one that is indiscriminate in its expected potential damage.

1.2 Terrorist Targets

The US State Department includes a third aspect in its definition – that of the target, “the term ‘terrorism’ means premeditated, politically motivated violence perpetrated against noncombatant targets by subnational groups or clandestine agents, usually intended to influence an audience.” Here, “‘noncombatant’ is interpreted to include, in addition to civilians, military personnel who at the time of the incident are unarmed or not on duty.” This definition includes the targets themselves. Military, leaders, civilian law-enforcement, and civilians are all possible targets. Use of non-combatant in the definition is not uncommon (Hutchinson 1972; Sederberg 1989, 1995; Watkin 2004).

Targets are important to terrorists; whereas in an interstate military dispute, there are rules for combat. The only allowable targets are combatants. This law is the result of both the centuries of Just War Theory (Bluth 1987; Zupan 2004) and of current international law (Johnson 2000; Watkin 2004). However, while armies are not allowed to target those not actively fighting, terrorists tend to do just this. Why? Hutchinson explains, “The revolutionary movement deliberately intends these [terrorist] actions to create a psychological effect on specific groups and thereby to change their political behavior and attitudes” (Hutchinson 1972: 385). In other words, since the terrorists cannot create victory with superior numbers, they must create victory through psychological warfare.

1.3 Motivation

Motivation is the third important factor in defining terrorism. According to Ahmad (1986: 3), “Motivations [of terrorists] have varied... Many terrorists in our time have no identifiable goals.” While some hold that this is incorrect in...
that those who use terror techniques for mere monetary gain are nothing greater than criminals, others maintain that terrorists are, by definition, criminals (Enders and Sandler 1999). Ahmad merely adds crime as one of the categorizations of terrorism based on its source, along with state, religion, protest, and pathology (Ahmed 1986: 3). However, since this paper only examines ethnonational terrorism, the sole motivation of interest here is ethnonational autonomy.

2 Ethnonational Terrorism

The previous section dealt with creating an acceptable definition of terrorism – the action. This section deals with the actors – the ethnonationals. For ethnonational, I begin with Rudolph’s (1977: 537) definition, “those groups which perceive to share a common (national) identity, different from that of other nationalities in the countries” (emphasis in original). The emphasis is important; researchers disagree about the “reality” of the nation. Some contend that nations are primordial, that they exist in reality (Gurr 1994; Cohen 1999); whereas others hold that nations are merely social constructs (Ranger 1999). Rudolph’s definition avoids this argument, as it relies on a mere perception of nationhood.

As this research uses the Minorities at Risk dataset, the definitions used for these groups mirrors those used by the Minorities at Risk project. However, for the purposes of this research, I am using the term “ethnonational” in a way that is different from how the Minorities at Risk Project defines it. Here, “ethnonational” will be used as an umbrella term that includes all indigenous peoples, ethnonationals, and national minorities as the Minorities at Risk Project defines these terms.

Using the Minorities at Risk dataset offers one level of constraints even before analysis can begin. The groups listed are ‘at risk’ in their states. That is, they must “collectively suffer or benefit from, systematic discriminatory treatment vis-à-vis other groups in a society; and/or collectively mobilize in defense or promotion of its self-defined interests” (Davenport 2003: 5). Furthermore, the groups must have a population of either 100,000 or 1% of the population of the state. Thus, small repressed groups are not included, nor are large unrepressed groups. For example, the Sámi of Scandinavia are not included as they do not reach the population requirements.

The first subgroup of ethnonationals is the indigenous peoples. According to the Minorities at Risk project, indigenous people are “conquered descendants of earlier inhabitants of a region who live mainly in conformity with traditional social, economic, and cultural customs that are sharply distinct from those of dominant groups.” Western Europe has few remaining indigenous groups, and none as minorities at risk. Examples include the Sámi of Lapland and the Nentsy of Siberia. The Basques, while they are “conquered descendants of
earlier inhabitants of a region,” are not indigenous peoples by this definition because they do not currently live traditional lives. As such, they are classified as ethnonationalists, the second subgroup.

Ethnonationalists are “regionally concentrated peoples with a history of organized political autonomy with their own state, traditional ruler, or regional government, who have supported political movements for autonomy at some time since 1945.” Some examples of Western European ethnonational populations are the Basques (Euskadi) of France and Spain, the Corsicans and Bretons of France, and the Ulster Catholics and the Scots in the United Kingdom.

Finally, national minorities are “segments of a trans-state people with a history of organized political autonomy whose kindred control an adjacent state, but who now constitute a minority in the state in which they reside.” National minorities in Western Europe include the South Tyroleans of Italy, and the Jurassiens of Switzerland. The South Tyroleans share ethnic culture with Austria – just across the Brenner Pass. The Jurassiens were French-speaking Roman Catholics in the German-speaking Protestant canton of Berne. They are kindred with the French-speaking Roman Catholic state across the border – France.

Why classify these three different groups together? They have a tripartite commonality: they are minorities living on their historic land not currently able to rule themselves. Because of this commonality, the fundamental raison d’être for each is evidently the same - to obtain a significant measure of autonomy, if not independence.

Thus, in sum, ethnonationalist terrorism is defined as having the following three facets. The first two define it as terrorism: target of non-combatants, and use of non-discriminate means; the third defines it as ethnonational: hold independence, or at least greater autonomy, from state as a motive.

3 Contributing Factors

From a review of the literature and rumination on history, three aspects seem to affect terrorist activities in independence movements (see Figure 1). The three facets are cohesiveness of a national identity, the financial differences within the state, and the openness of the state. The first gives a reason for the people to form groups, the second provides a concrete impetus for action, and the third provides a missing retardant to escalation of activities.

3.1 Cohesiveness of National Identity

The nation is extremely important to people. Some would go as far as to state that “the nation” is the most important factor in the creation of states. Richard
Muir contends

During the last two centuries, the nation-state has come to be regarded in most quarters as the most fitting form of political organisation and control. Indeed, to many it is seen as the only legitimate vehicle of political rule, any other arrangement being denounced as an affront to national integrity. (Muir 1997: 38)

Not all nations, however, are states, nor are all states nations. The Kurdish nation is spread across the territories of five states. The state of Nigeria is comprised of three major nations (Hausa, Yoruba, and Ibo), and approximately 250 smaller ones. In both cases, the lack of being a nation-state seems to have seriously hampered the peoples. Iraq, Iran, and Turkey have all oppressed the Kurds at some point in history. The state of Nigeria has tried many different types of governmental styles and has yet to succeed with any of them due to the constant tensions between the three major nations.

These two example are not unique, and some terrorists find their impetus for action in those differences between nation boundaries and state boundaries. Crenshaw (1981: 383) states the first condition that can be considered a direct cause of terrorism is some concrete grievance of the nation against the state. From where does this concrete grievance originate? Post, states “bitterness and resentment against the dominant ethnic group have been passed down from generation to generation” (Post 2000: 280). This inter-generational socialization is one hallmark of a nation: common historical memories (Muir 1997: 39). Crenshaw also found, “In nationalist or separatist groups in particular, the influence of history and family traditions may be decisive” (Crenshaw 1998: 253).

Clearly, nations and nationalism are important factors driving people. That acknowledgement of a nation-state being the sole “legitimate vehicle of political rule” (Muir 1997: 38) alone provides an impetus towards self-rule. It is this impetus that causes some groups to attempt the separation from the state. Knight contends “the ideal of achieving a good areal fit between ‘nation’ and ‘state’ leads some ‘nations’ to seek the creation of their particular

What makes a nation, though?

First of all, to have any nationalist feelings, the people must classify themselves as a nation; they must perceive themselves to be a nation. According to political geography theorists, several things identify a nation. Mellor (1989: 4) defines a nation as “comprising people sharing the same historical experience, a high level of cultural and linguistic unity, and living in a territory they perceive as their homeland by right.” Anthony Smith, while denying the reality of nations, admits to their de facto existence, and defines them as “a named human population possessing a myth of common descent, common historical memories, elements of shared culture, an association with a particular territory, and a sense of solidarity” (Smith 1988: 9). Both of these definitions can be used to create indicators of ‘nationhood,’ as both definitions contain the same three points: history, language, and territory (see also Johnson 1982).

Again, terrorists need a cause; they need something to drive their actions. This category and the previous category give them that cause. They see nationhood as a goal. The idea that the nation-state is the only legitimate form of nation drives people to seek separation. In fact, examples abound for this assertion: The Turkmen from China, Bosnians from Yugoslavia, and Eritreans from Ethiopia. The fact that terror was used in many secessionist movements is well documented (Sikhs in India, Chechynans in Russia, and Ulster Catholics in the United Kingdom). This category provides nationalism as a basis for terror activities, as a rallying point for the subgroup. The next category provides a further impetus to make the break from the state.

3.2 Financial Disparities within the State

Continuing the theme of the importance of separation, financial differences do this as well. Medrano (1994) explores two alternative theories that propose to explain how ethnic concentrations affect ethnic conflict. The first, Ethnic Competition Theory asserts that much ethnic conflict comes from competing for the state’s resources. The second, Ethnic Segregation Theory asserts ethnic conflict comes from one group segregating itself from the others. In both of these theories, the conflict arises when the ethnic minority sees itself as a group separate from the larger state. Interestingly enough, neither theory requires the ethnic minority to be disadvantaged. In both cases, the minority may actually be economically advantaged within the larger state. In this case, they tend to see themselves as being dragged down by the state, as opposed to being repressed by it (Medrano 1994).
In addition, for either financial repression or retardance, money is a great motivator for action. Seeing hard-earned money go to feed ‘different’ people can easily foster a sense of resentment. Similarly, seeing one’s children go hungry while a separate nationality living next door succeeds can create the same sense of injustice. In either case, economic disparities do cause a radicalization within the population.

If anything positive can come out of the horrific 9/11 terror attacks, it should be the emergence of a concerted approach to addressing this bitterness [caused by the North-South disparities], one possible root cause for the support that Osama bin Laden’s advocacy has received on the streets in much of the developing world, even outside the Islamic bloc of countries. (Malone and Thakur 2003)

The same sense of resentment occurs within a state in which there is a definite difference in economic achievement and a definite difference in ‘group identification’ (Ross 1993).

3.3 Openness of the State

Why would an open, free, democratic state be susceptible to terrorism more than a repressive dictatorial state? Americans seem to have an image of terrorists toppling strong-armed dictators to return to rule to the people in their mind’s eye - at least for ethnonational terrorists, and at least until September 11, 2001. Why might democracies be hit more often by terrorists than other regime types? Sederberg explains:

Relatively open societies present many more opportunities for attack, open borders facilitate the free-flow of radicals and their weapons from state to state, and an unrestricted media guarantees maximum publicity for terrorist events. Moreover, the response to terrorism will be compromised by the commitment to the rule of law, which restrains the police and the courts but has no effect, of course, on those willing and able to wage terrorist campaigns. (Sederberg 1989: 161)

In fact, thinking of those terrorist organizations that have garnered the limelight, Americans tend to think of the IRA, the PLO, the ETA, and al-Qaeda. Each and every one of these organizations either had their base in a democratic country, or operated against one (or more). 5 Kegley pointed out that terrorism

5This is not to say that all terrorists are in democratic nations. Those regimes that use terror as a successful governing policy are obviously not in democratic states. However, as this research solely examine ethnonational terrorism, state terrorism will be ignored.
tends to occur, or at the very least has a higher probability of occurring, in countries that cannot or will not prevent terrorism and cannot or will not take severe action against it (Kegley 2003: 94). Crenshaw concurs with the absence of effective security measures (as found in democratic regimes) as being a necessary (though not sufficient) condition for terrorist activities (Crenshaw 1981: 383). She cites a democracy’s inherent inability or unwillingness to use the necessary force to crush terrorist groups. Dictators who wield much greater relative power are more able to turn the entire attention of the state security forces to eliminate terrorists without any of the philosophical conflicts a democracy would theoretically feel. In sum, “Neither competing political parties nor terrorist groups are able to endure in closed societies ruled by strong authoritarian regimes” (Weinberg 1991: 424).

3.4 Summary

Terror is a tactic used to achieve important goals - goals that are important to the user of terror. In examining ethnonational terrorism, I first examined what it means to be a nation. The first two categories deal with the strength of national feelings: the stronger those feelings, the stronger the need to become a nation-state. Monetary disparities are yet another impetus to action. This one is more concrete than the ephemeral nation. Monetary differences touch at the heart of every family member. Finally, the ability of the state to control its citizens affects their ability to come together to reach a ‘critical mass’. The stronger and more repressive the nation, the less it is constrained by a ‘democratic ethos’, the more able the state is to both keep the terrorists from coming together and to suppress them once they begin.

4 Methods

The Minorities at Risk dataset provides information on politically active communal groups with populations in excess of 500,000. The current number of such groups is 285. The Polity IV (v2000) project focuses on the state, not the ethnic groups, with the primary focus being the powers of the government, specifically the levels of democracy and authoritarianism in the state. The World Bank provides economic information. Gurr (1993) determined that the country’s GDP is an indicator of whether a group will use violent means to seek independence. Furthermore, as a poorer state will have more problems controlling its territory, the GDP is an additional indicator variable for state strength.

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6However, dictators who relax their controls over the populace may, in effect, be encouraging a terrorist outbreak. Such happened to Franco in the early 1960s (da Silva 1975).

7However, due to the AR1 correlation structure, missing data, and other factors, only 154 groups could be used.
4.1 Terrorism

The first variable needing operationalization is the dependent variable, terrorism. The Minorities at Risk project variable REB measures the highest level of violent protest in a nation during the specified year. The value recorded is only the highest level of rebellion. A REB value of ‘0’ indicates no rebellion has taken place during the year. A REB value of ‘1’ indicates low-level rebellion, including political banditry and sporadic terrorist activities – i.e. no organized campaign. A REB value of ‘2’ indicates an organized campaign of terrorism occurred during that year. Values of ‘3’ and above indicate higher levels of conflict. Unfortunately, they could also indicate a terror campaign occurred that year; it cannot be determined from the data. Gurr (1993) has already determined several factors that indicate whether a minority group will escalate to the level of violence. This research, however, only looks at the causes of those groups using terrorist tactics. This creates a quandary: how can terror be effectively measured using MAR data? As this research does not concern itself with guerilla and civil wars or local rebellions, I created a ternary variable consisting of: less than terrorism, terrorism, and more than terrorism. I then eliminated all instances of ‘more than terrorism’ from consideration, as I could not draw confident conclusions from those measures.

4.2 Measures of Nationhood

HN1: Groups with historic claims to statehood will have a higher likelihood of using terrorism.

HN2: Groups with a culture more separate from the containing state will have a higher likelihood of using terrorism.

HN3: Groups with a language different from the containing state will have a higher likelihood of using terrorism.

HN4: Groups that are regionally compact will have a higher likelihood of using terrorism.

According to the literature, for a spirit of nationalism to occur, there must be a nation. Geography theorists have a few necessary requirements for nationhood. This series of variables measures them. All four of these variables come from the Minorities at Risk dataset.

4.2.1 Historic Statehood

This dichotomous variable will indicate whether the nation has a historic claim to nationhood. That is, whether the nation was at one time autonomous, with an ability to be called an independent nation. The MAR variable AUTON is a dichotomous variable that does just this. A value of ‘0’ indicates no historic autonomy; a value of ‘1’ indicates historic autonomy.
4.2.2 Separate Culture

A set of customs is another facet of nationhood. Those with a set of common customs tend to identify with each other. The MAR variable ETHDIFXX measures both the strength of the nation’s cultural identity and the degree of difference between it and the state. Possible values range from ‘0’ to ‘10’, with ‘0’ indicating no difference, and ‘10’ indicating a significant difference in language, custom, beliefs, and race.

4.2.3 Different Language

Continuing with the theme of categorizing substantial differences between the subnation and the state, this variable indicates the degree to which the nation’s language differs from its containing state. The MAR variable LANGFAM measures the similarity in languages between the state and the nation. A score of ‘20’ indicates the state and nation share a common language, while a score of ‘1’ indicates they are of completely different language families. For every increase in common ancestral languages, LANGFAM increases by one point. Thus, a ‘19’ represents two languages that share all common ancestor languages, but are themselves different.

4.2.4 Regional Compactness

A greater level of compactness creates a greater feeling of unity within the group, which causes a greater chance for the nation to unite to fight for independence. Nations with a small population density or nations that have been diluted by state encouragement for mobility will be less able to pull themselves together as a cohesive unit. Nations with a large concentration of members will also more easily define themselves as a part of that nation. The dichotomous MAR variable GC2 measures whether or not the group is spatially contiguous.  

4.3 Economic Differentials

HE1: Groups that are economically disadvantaged will have a higher likelihood of using terrorism.

HE2: Groups that are economically advantaged will have a higher likelihood of using terrorism.

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8Specifically, GC2 measures if “a spatially contiguous region larger than an urban area that is part of the country, in which 25% or more of the minority resides and in which the minority constitutes the predominant proportion of the population” is present (Davenport 2003: 16). A ‘1’ indicates yes, while a ‘2’ indicates no. Recoding this variable to a dichotomous 0-1 variable measuring compactness (‘1’ indicates compactness, ‘0’ indicates no compactness) made interpretation more intuitive.
One way of measuring this concept is to find the actual average incomes for the state and for the nation, and then compare them. However, this is quite problematic; as such information is rarely available for even the most industrialized countries, and even more rarely for the lesser-developed countries. The MAR variable ECDIFXX measures the economic differential between the minority group and the state. Possible values for the MAR variable range from ‘-2’ (a strong economic advantage) to ‘4’ (an extreme economic disadvantage). According to the hypotheses being tested, a number farther from ‘0’ would indicate a greater probability towards using terrorist tactics for two reasons: a greater disparity causes a greater division between the nation and the state, and a greater disparity indicates the nation is either disadvantaged (and thus probably feeling repressed) or advantaged (and thus feeling as though they are ‘carrying’ the rest of the state). Two variables were created from this one: a variable measuring economic advantage, and a variable measuring economic disadvantage.

4.4 Regime Type and Strength

HR1: Groups existing in a democracy will have a lower likelihood of using terrorism.

HR2: Groups existing in more democratic containing states will have a higher likelihood of using terrorism.

HR3: Groups existing in states with lower GDPs will have a higher likelihood of using terrorism.

The literature seems rather contradictory on this aspect. While autocracies should have more terror activity (they are repressive), they should also have less (they can easily quash any hint of uprising). Democracies should have less terror (they provide non-violent means of dealing with dissatisfaction); they should also have higher levels (as they are unable or unwilling to suppress terrorists effectively). Finally, those states that are weak should also have higher levels of terrorism.

Testing all of these statements at once is not as difficult as first appears. Five variables are used to test these hypotheses. The first three are dichotomous variables indicating whether the state is democratic (+6 or greater on the POLITY2 variable), whether the state is autocratic (-6 or less), or whether the state is ‘transition’ – the middle-scoring states. The fourth variable is the product of the state’s democracy and the level of democracy in the state, capturing the level of democracy in democratic states. The final variable is the GDP (in constant dollars in terms of purchasing power parity) of the state.

9This convention is completely in accord with suggestion by the Polity project (Jaggers and Gurr 1995; Marshall and Jaggers 2000).


<table>
<thead>
<tr>
<th>Variable</th>
<th>Effect on Probability of Terrorism</th>
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<tr>
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<td>Language Differences</td>
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<tr>
<td>GDP of State</td>
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Table 1: Schematic summary of the proposed hypotheses.

With these formulations, it is expected that the democracy dichotomous variable will have a negative coefficient with respect to autocracy (Benoit 1996). Also, the democracy interactive term should have a positive coefficient, indicating that the more purely democratic a state, the higher the chance of terrorism occurring. That is, while a democratic state has a lower chance of spawning a terrorist group, all things being equal, once a group starts, the greater the level of democracy in that state, the less able it is able to stop the terrorism. Finally, the results should show that lower GDPs result in higher probabilities of terrorism, as the state is more at risk and the terrorist groups are better able to survive when the state is poor (Gurr 1993).

4.5 Statistical Concerns

I used a population-averaged panel-data model using a generalized estimation equation. The family and link for the logit model are the standard binomial and logit for the logit model, binomial and probit for the probit model, and binomial and cloglog for the cloglog model. The use of GEE over a standard cross-sectional time-series logit or probit is that it allows one a freer hand in correcting for the correlation structure of the data. For all three models, independent, exchangeable, and AR1 were examined to determine which produced the best fit as determined by model significance. In all three cases, AR1 was expected to produce superior results, a priori, because of the inherent serial correlation in the GDP term and the memory of human groups.10

Using three statistical models that supposedly measure the same thing allow

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10 The three correlation structures produced deviances of 572 (independent), 573 (exchangeable), and 441 (AR1) for the logit; 584 (independent), 585 (exchangeable), and 451 (AR1) for the probit; and 571 (independent), 573 (exchangeable), and 441(AR1) for the complementary log-log.
me to test their suitability as models. As logit and probit functions differ only in their tails, they should produce similar statistical findings vis-à-vis direction and statistical significance. The coefficients should also differ by a factor of approximately 1.7. If not, then the applicability of the models is called into question (Long and Freese 2003: 117). There is, however, no statistical test to determine how far from 1.7 is too far. Furthermore, since both are symmetrical about $\lambda = 0.50$, events that rarely occur will not be modeled well by either. The complementary log-log function is asymmetric, thus it models rare-event data better than either the logit or the probit. As such, the complementary log-log function is the superior model for this data.

Those familiar with ordinary least squares regression are also familiar with $R^2$ as a measure of predictive ability of the model. There is no genuine $R^2$ for binary dependent variable models. As a substitution for $R^2$, some authors use predictive accuracy. However, as shown by Hosmer and Lemeshow (1989: 147), even properly specified models can score low on tests of accuracy. They proposed their own test based on categories. Were we looking to create a scoring index with a score over $\lambda = 0.50$ indicating the group will use terrorism, this would be an appropriate method to assess fit. There are two problems with this tack. First, there is no a priori reason to believe that $\lambda = 0.50$; it is a function of the costs associated with false positives and true negatives which can be determined through the process of calibration (Venkatraman and Begg 1996: 835). Second, since this model merely focuses on the effects of certain covariates on the propensity to use terrorism, determining the cutoff point is irrelevant. As such, a better solution is to fit a receiver operating characteristic curve (DeLong, DeLong, and Clarke-Pearson 1988: 837). The area under the ROC curve is the probability that a group using terrorism scores higher on the test than a group that does not (Obuchowski 2003: 5). Thus, for the complementary log-log model, there is an 84.2% probability that a group using terrorism will score higher in the model than a group that does not. If we can assume that the test results (i.e. the predicted outcomes) for both the population of terror groups and the population of non-terror groups are normally distributed, then the area under the parametric ROC curve estimates that the probability increases to 91.3% (see Figure 2).

To give the area under the ROC curve more interpretability and comparability, let us compare it to other common systems and tests. Using the parametric estimate of the area to keep in line with the other disciplines, 0.913 compares quite favorably to many medical and safety tests. In 1988, the classification of tumors based on the mammogram has a maximum area under the ROC curve of 0.87. Radionuclide scans of the brain also have an area of approximately 0.87. The Armed Forces Qualifying test has the ability of discriminating between those who will succeed and those who will fail at one of the Navy schools at 85%. The model of terrorism also compares favorably to ultrasound tests on

\footnote{Both of these values are maximums found in the literature of the time. The actual value of the area under the curve is a function of the quality of the machine used, the ability of the operator, and the ability of the interpreter.}
aircraft to detect cracks (mean area = 0.68, range from 0.50 to 0.92). However, it is significantly lower than classical chest X-Rays (0.97) (Swets 1988).

Going further than just comparison with other known tests, Hosmer and Lemeshow give a guide as to how the area related to the ‘goodness’ of the model. They hold that anything above 0.70 is considered acceptable discrimination; above 0.80, excellent; and above 0.90, outstanding. Furthermore, anything above 0.90 is likely to suffer from either separation or quasi-separation (Hosmer Lemeshow 2000: 162). Neither is a problem with this model as estimated.\footnote{However, in further research, I have found that group concentration quasi-separates the data when the Western Europe subset is used.}

5 Results and Discussion

The results, with respect to the hypotheses, were mixed. While the economic differentials and the state openness and strength categories were significant and in the predicted direction, the group cohesiveness category was not. With regards to the state itself, all three hypotheses were supported by the data (Table 2).

Being a rich (high total GDP) state reduces the chance of experiencing terrorism. However, once the terror begins, states that are more democratic have a
Table 2: Results of the GEE population-averaged panel data regression using autoregressive-1 correlation structure. In each case, 1956 observations and 154 groups. Numbers are non-standardized coefficients. Numbers in parentheses are standard errors adjusted for clustering on ethnic group. Significance levels: #: $p \leq 0.10$; *: $p \leq 0.05$; **: $p \leq 0.01$; ***: $p \leq 0.001$. Base comparisons for regime type are autocracies; however, removing the transition variable does not substantively alter the results. The mean VIF for the models is 5.00, with the only two variables causing concern being the democracy and the democracy level terms, which have an unsurprisingly high correlation ($\rho = 0.9721$); however, this only indicates that those two coefficients are more highly statistically significant than reported.

<table>
<thead>
<tr>
<th>Variable</th>
<th>logit</th>
<th>probit</th>
<th>cloglog</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>0.728</td>
<td>0.328</td>
<td>0.673</td>
</tr>
<tr>
<td></td>
<td>(0.894)</td>
<td>(0.436)</td>
<td>(0.771)</td>
</tr>
<tr>
<td>Ethnic Differentials</td>
<td>$-0.310^*$</td>
<td>$-0.143^#$</td>
<td>$-0.272^#$</td>
</tr>
<tr>
<td></td>
<td>(0.157)</td>
<td>(0.077)</td>
<td>(0.139)</td>
</tr>
<tr>
<td>Language Difference</td>
<td>0.063</td>
<td>0.033</td>
<td>0.060</td>
</tr>
<tr>
<td></td>
<td>(0.059)</td>
<td>(0.028)</td>
<td>(0.051)</td>
</tr>
<tr>
<td>Group Concentration</td>
<td>2.956***</td>
<td>1.171*</td>
<td>2.831***</td>
</tr>
<tr>
<td></td>
<td>(0.886)</td>
<td>(0.460)</td>
<td>(0.753)</td>
</tr>
<tr>
<td>Positive Economic Differentials</td>
<td>1.372</td>
<td>0.530</td>
<td>1.210</td>
</tr>
<tr>
<td></td>
<td>(0.961)</td>
<td>(0.460)</td>
<td>(0.876)</td>
</tr>
<tr>
<td>Negative Economic Differentials</td>
<td>0.621*</td>
<td>0.266#</td>
<td>0.557*</td>
</tr>
<tr>
<td></td>
<td>(0.273)</td>
<td>(0.156)</td>
<td>(0.222)</td>
</tr>
<tr>
<td>GDP of State (trillion USD)</td>
<td>$-0.5167^*$</td>
<td>$-0.2206^#$</td>
<td>$-0.4932^*$</td>
</tr>
<tr>
<td></td>
<td>(0.253)</td>
<td>(0.117)</td>
<td>(0.224)</td>
</tr>
<tr>
<td></td>
<td>(3.526)</td>
<td>(1.799)</td>
<td>(3.201)</td>
</tr>
<tr>
<td>Level of Democracy</td>
<td>1.262***</td>
<td>0.526**</td>
<td>1.170***</td>
</tr>
<tr>
<td></td>
<td>(0.390)</td>
<td>(0.205)</td>
<td>(0.339)</td>
</tr>
<tr>
<td>Transition State</td>
<td>$-0.550$</td>
<td>$-0.207$</td>
<td>$-0.545$</td>
</tr>
<tr>
<td></td>
<td>(0.940)</td>
<td>(0.362)</td>
<td>(0.921)</td>
</tr>
<tr>
<td>Constant</td>
<td>$-7.001^**$</td>
<td>$-3.225^**$</td>
<td>$-6.907^{***}$</td>
</tr>
<tr>
<td></td>
<td>(2.246)</td>
<td>(1.031)</td>
<td>(1.892)</td>
</tr>
<tr>
<td>Model Significance (Wald $\chi^2_{10}$)</td>
<td>28.98***</td>
<td>18.51*</td>
<td>38.32***</td>
</tr>
<tr>
<td>Area under ROC curve</td>
<td>0.9076</td>
<td>0.9029</td>
<td>0.9164</td>
</tr>
</tbody>
</table>

greater difficulty stopping it. Thus, for a state scoring at the middle in all other variables, assuming the level of democracy from 10 to 6 results in a decrease in terror probability from 0.0546 to 0.0002 (see Figure 4). This can be offset by increases in the total GDP of the state. Doubling the GDP of a perfectly demo-

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13Unless otherwise specified, explorations of marginal effects were done holding all continuous variables at their mean value and all others at their ineffectual value (zero for all variables except for $\text{langfam}$, which was held at 20).
A perfectly democratic state is any state scoring 10 on the Polity scale.

In addition to regressing on the language difference variable, I also created 20 dichotomous 0-1 variables coded ‘1’ if the languages differed by more than x degrees. Running regressions with each of the dichotomous language variables separately allowed me to examine if there was a peak level at which language became a significant indicator of terror probability. The highest significance level attained was at ‘4’; that is, when the languages were 16 (20 - 4) degrees removed. However, although this produced the highest level of significance, it was still not significant (b = -0.9836, p = 0.098).

Stalin used ethnic dilution to extend Russian control over the other Soviet Socialist Republics in the USSR. This seems to have worked in the short-term; however, the effects of that policy are being felt in the Commonwealth of Independent States members.
Figure 4: Connected scatterplot of POLITY2 score against predicted probability of a terrorist attack. Terrorism probability was calculated from the given polity score, while holding all other variables at their means (continuous variables) or their ineffectual values.

the most significant, but it also has the greatest effect on the probability. For a perfect democracy, a concentrated group has almost a 0.60-point higher chance of using terrorism than does a non-concentrated group.

Ethnic differentials, on the other hand, were found to be negatively correlated with terrorism propensity, at near the standard level of significance (b = -0.272, p = 0.051). This finding runs completely counter both to the hypothesis and to common sense. What could be happening here? While this variable does measure the level of ethnic differences between the nation and the state, it does not measure repression, per se. Even replacing the ethnic difference variable with a race variable does not change the direction of the relationship (although race is statistically significant p = 0.013). So, both ethnic differences and race differences reduce the probability of terrorism in the group. As a group of indicators, the group cohesiveness was highly significant (Likelihood Ratio Test $\chi^2_4 = 272.86$, p $\leq 0.0001$).

Economic differentials were posited to increase the propensity to escalate to terrorism, either positive or negative differences. The coefficients for both economic difference variables were in the predicted direction; however statistical significance was not achieved for the positive differentials variable. Thus, the data did not support the theory that groups will use terrorism if they see themselves as being dragged down by the other ethnic groups. A closer look at
those economically superior groups who did resort to terrorism reveals that even they used terrorism as a response to other factors. The Bagandas of Uganda, the Maronite Christians and Sunnis of Lebanon, and the Mohajirs of Pakistan were all economically advantaged, yet resorted to terrorism. The Bagandas did so as a response to a change in their own political power (Dagne and Farrell 2003). The Maronites and Sunnis of Lebanon did so for religious reasons (Mark 2003). The Mohajirs are an Urdu-speaking Indian immigrant sect in Pakistan who used terrorism as a response to ethnic repression by the Punjabi in Karachi (Pike 1999). Thus, the contention that economically advantaged groups are also prone to ethnic violence does not appear to extend into the realm of terror. Economically disadvantaged and repressed groups are, however, more likely to resort to terror ($b = 0.557, p = 0.012$). For that perfectly democratic state, increasing the economic differential from no differential to slight differential ($\text{econeg} = 1$) yields a 0.0546-point increase in the probability of terrorism. If that same state has extreme economic differentials ($\text{econeg} = 4$), then the probability raises to 0.4050 – just due to the economic differences. Thus, reducing economic disparities through increasing accessibility to higher education, removing land ownership impediments, and increasing the presence of minorities in official positions, reduces the chance of that ethnic minority resorting to terrorism.

6 Conclusion

What conclusions follow from the preceding discussion? According to this model, we can conclude primarily that states are more than capable of reducing the probability of terrorist acts on their own soil. Furthermore, except for reducing the level of democracy in the state, an action which would affect other factors explored here, and reducing the regional concentration of the minority groups, an action which infringes on group and individual rights, all actions are in accord with current international norms: increase the wealth of the state, become a democracy, and reduce economic differentials across minority groups. These are things states should probably be doing in the first place.

As with any other model, this model is an approximation of reality. As such, certain areas demand greater scrutiny. Chiefly, why are ethnic differences not associated with higher probabilities of terrorism? Do the “rules of usage” for terrorism vary across the different types of ethnic minorities? That is, do indigenous peoples have a fundamentally greater or lower chance of using terrorism, or do religious minorities? Furthermore, are the different groups affected by the factors differently? Each of these questions, and many more, need to be examined to come to a better understanding of how state actions influence the actions of their minorities at risk.
7 Reference List


