5-2006

The Pressure Model of Terrorism: A Behavioralist Model for Ethnonational Terrorism in Western Europe, 1945-2000

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Recommended Citation

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The Pressure Model of Terrorism:

A Behavioralist Model for Ethnonational Terrorism in Western Europe, 1945-2000.

A Dissertation Presented for the
Doctor of Philosophy Degree
The University of Tennessee, Knoxville

Ole J. Forsberg
May 2006

Dedication

This work is dedicated to five incredible human beings.

- First, to Brother Donald Stabrowski, for setting that little Math-Physics major on a path so many years ago that eventually led to this.

- Second, to Joe, for showing me what being a brother is really about. Nothing I have done could have been done without you being there, being my alter ego, my best friend.

- Third, to Chelsi, thank you for being that friend when I needed it most. Shedding sunlight into my darkest hour.

- Fourth, to Stephanie James, whose brilliant light was all too soon extinguished by the darkness of night.

- Finally, to my grandpa, who gave me everything.

May God bless you all.

Acknowledgments

I would first like to acknowledge and thank the Yates Bleachery Company for their dedication to graduate education at the University of Tennessee by funding the Yates Dissertation Fellowship, of which I am the 2005–2006 recipient. It is organizations like this that allow a graduate school to flourish. According to the fellowship, "the Yates Graduate Fellowship Endowment is a legacy of the generosity of the estate of Arthur E. Yates (1915–1997), former president of Yates Bleachery Company and a dedicated friend of the University of Tennessee. The Yates Graduate Fellowship Endowment was established in June 2000 to encourage, recognize and support outstanding graduate students. The current use of the endowment from the Yates estate provides awards to be given each academic year to doctoral students in the completion of their dissertations."

Second, every work of this size is a joint effort of many people. I could not have come close to finishing this without the tireless dedication of my committee: Mary Caprioli, David Houston, Anthony Nownes, and David Ostermeier. Never has a dissertation committee worked so well together. Thank you all.

Finally, I would like to thank my family and friends for listening to me blab on about terrorism even when they would much rather blab on about Tennessee football.

Abstract

The purpose of this study is to determine which factors affect an ethnonational group's decision to utilize terrorism to obtain their desired outcomes. Current theories have reached an answer, but theoretical underpinnings of those answers are disparate and weak. Thus, in answering this question, a new model of terrorism is necessary — one which spans the four primary levels of analysis. I do this using a weak rational choice model as a cross-level link, and using psychological models as a basis for the individual-level actions.

While the model is not unequivocally and universally supported by the tests, it is able to explain several previous findings in the literature and to explain the counter-intuitive findings regarding democracies.

The model is then applied to two real-life examples, the Ulster Catholics and the Scots, to determine what light it can shed on the differences in outcomes for those not too dissimilar groups. These findings reveal that the 1985 Anglo-Irish Agreement was doomed to failure because the underlying terrorism action pressure was too great, while the 1998 Good Friday Accord had a much greater probability of success because the terrorism action pressure acting on the Ulster Catholics was significantly lower in the mid-1990s.

Finally, several suggestions are made to reduce the probability of an outbreak of terrorism among a state's ethnonational minorities. While past use of terrorism is, by far, the best indicator of future use, other factors show importance as indicators. The percent of youth in the state, economic

differentials, level of democracy in the state, and globalization all increase the probability that the group will become a terrorist group. These results are especially important, especially given the current trends in the world. These trends, namely globalization, increased economic differences within and among states, and the increased number of adolescents in the world, are coming together to create an opportunity to either avert a catastrophic increase in terrorist events, or to allow it to occur.

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Chapter 1

Introduction

> Bygone battles, like old sins,
> cast long shadows.
>
> Proverb

E_{VER} since the September 11, 2001 terrorist attacks on the United States, terrorism has occupied the minds of many Americans, for those attacks were different — fundamentally different — from earlier ones. Earlier attacks on America either were by American citizens (e.g., Timothy McVeigh, the Weathermen, and the Earth Liberation Front) or were perpetrated overseas (e.g., East African Embassy bombings, the USS Cole, and the Berlin Discothèque).

The importance of terrorism as an issue facing individual states is not simply limited to the United States. In the European Union as a whole, terrorism ranks as the fourth most important issue at 10%. However, in

Spain, it ranks as number one at 46% (Figure 1.1) (European Commission 2005: 26). This may be due to the great number of terror-related deaths in Spain as compared to the European Union as a whole over the last four decades (Figure 1.2).

The media, politicians, and academics have each said much and written even more about terrorism and America's reaction to it over the past three years. Because of this, several pre-existing difficulties have made themselves quite apparent. First, there is no universally agreed-upon definition of terrorism. The US government itself employs four separate definitions for the one word.[1] Each definition reflects the needs and views of that individual agency. But more importantly, even in academic literature, terrorism lacks a universal definition. While researchers have written chapters upon chapters and volumes upon volumes trying to pin down a satisfactory definition for terrorism,[2] no single definition has gained common acceptance (Bantekas 2003). Is this a factor of the inherent 'fuzziness' of the concept and lingering cultural myopia, is this indicative of trying to cover too much with one definition, or is this yet another case of reification?

Tied in to this second question is a second difficulty made obvious by recent writings — rationale differs among terrorist groups. This means more than just that the ETA has a different mandate than does al Qaeda

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[1] The four definitions are found in the State Department, the Defense Department, the FBI, and the Homeland Security Department.

[2] See, for example, Bruce Hoffman, *Inside Terrorism*, (Columbia University Press, 1998); David Tucker, *Skirmishes at the Edge of Empire: The United States and International Terrorism*, (Praeger, 1997); Charles Kegley, *The New Global Terrorism: Characteristics, Causes, Controls*, (New Jersey: Prentice Hall, 2003); and Peter C. Sederberg, *Terrorist Myths: Illusion, Rhetoric, and Reality*, (New Jersey: Prentice Hall, 1989).
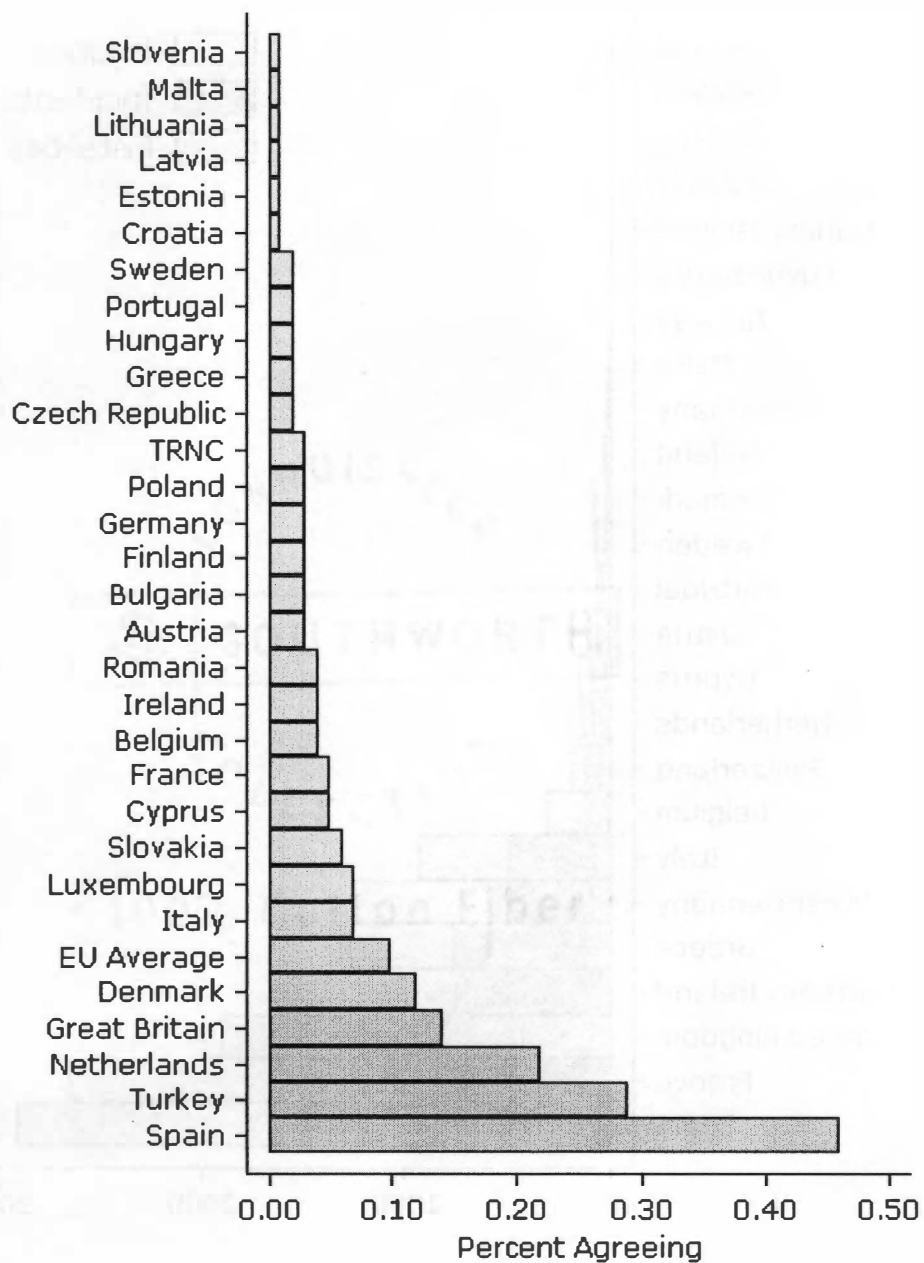
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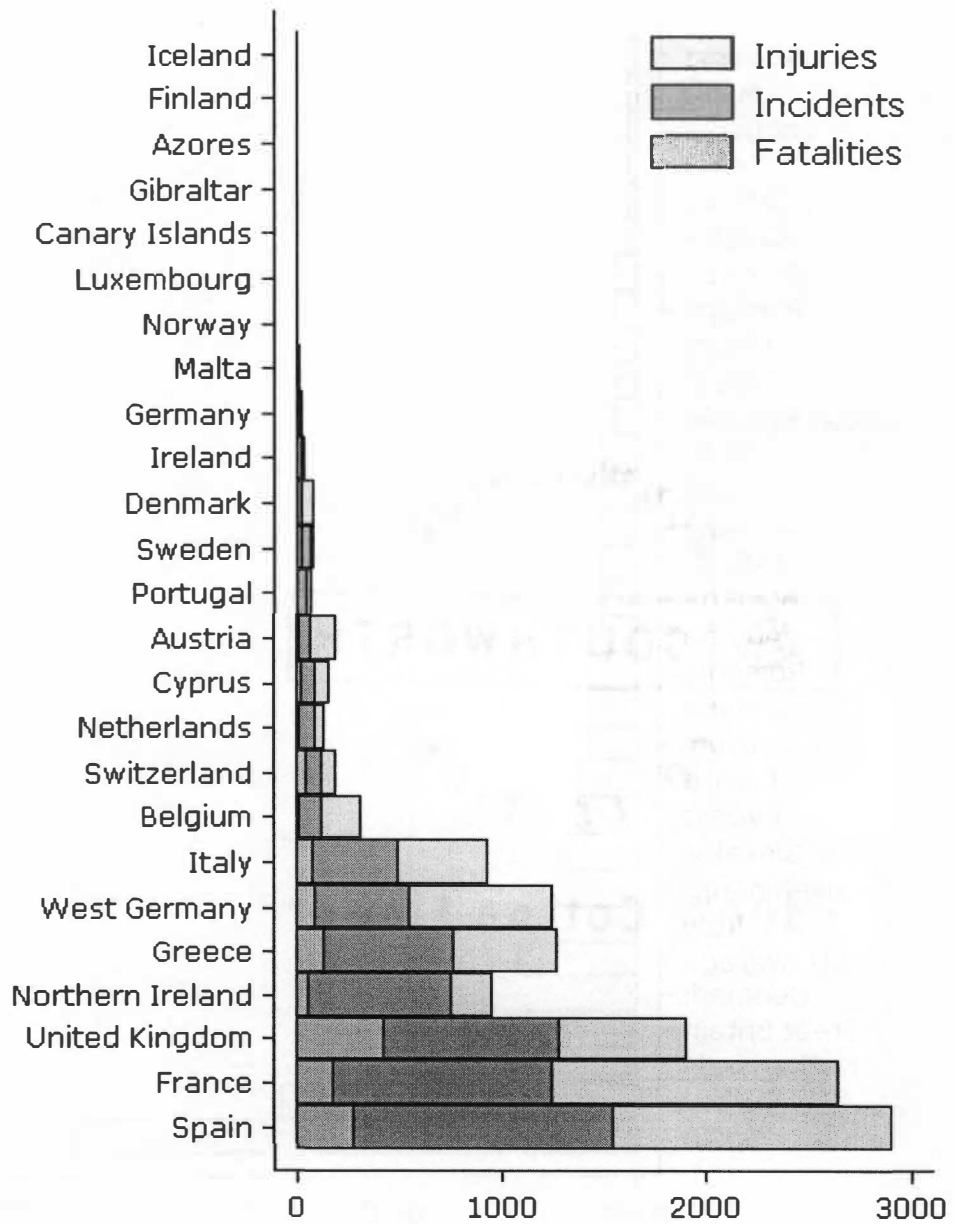
Figure 1.2: Terrorism events, fatalities, and injuries for Western European states, 1968-2005.

because they are in different regions of the world. It means that they are fundamentally different, because the terrorists and their aims are fundamentally different. The ETA seeks independence from Madrid, whereas al Qaeda seeks, among other things, a pan-Islamic caliphate.[3] Do these differences really matter in the study of terrorism? Can the conclusions reached for one type of terrorism be applied to a second?

Neither of these questions has received its due attention until now. In past studies, researchers have tended to group all terrorists together. Recently, however, research has begun focusing either on a specific variety of terrorists or on the individuals themselves. This dissertation seeks to place itself in this ever-expanding field. Instead of examining the causes of the creation of all terrorist groups, it specifically limits itself to a specific limited type in a specific limited geographical location — ethnonational minorities in Western European states.

Does restricting this research to a limited type of terrorism in a limited area of the globe severely restrict is usefulness? No. As Figure 1.3 shows, nationalist and separatist groups constitute the highest proportion of terrorist groups in the world, and of all regions, Western Europe is second only to the Middle East in terms of the number of nationalist and separatist groups using terrorism (Figure 1.4), and the number of ethnonational

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[3]Specifically, they seek "to establish a pan-Islamic Caliphate throughout the world by working with allied Islamic extremist groups to overthrow regimes it deems 'non-Islamic' and expelling Westerners and non-Muslims from Muslim countries" (TerrorismFiles.org Terrorist Organizations: al-Qa'ida).
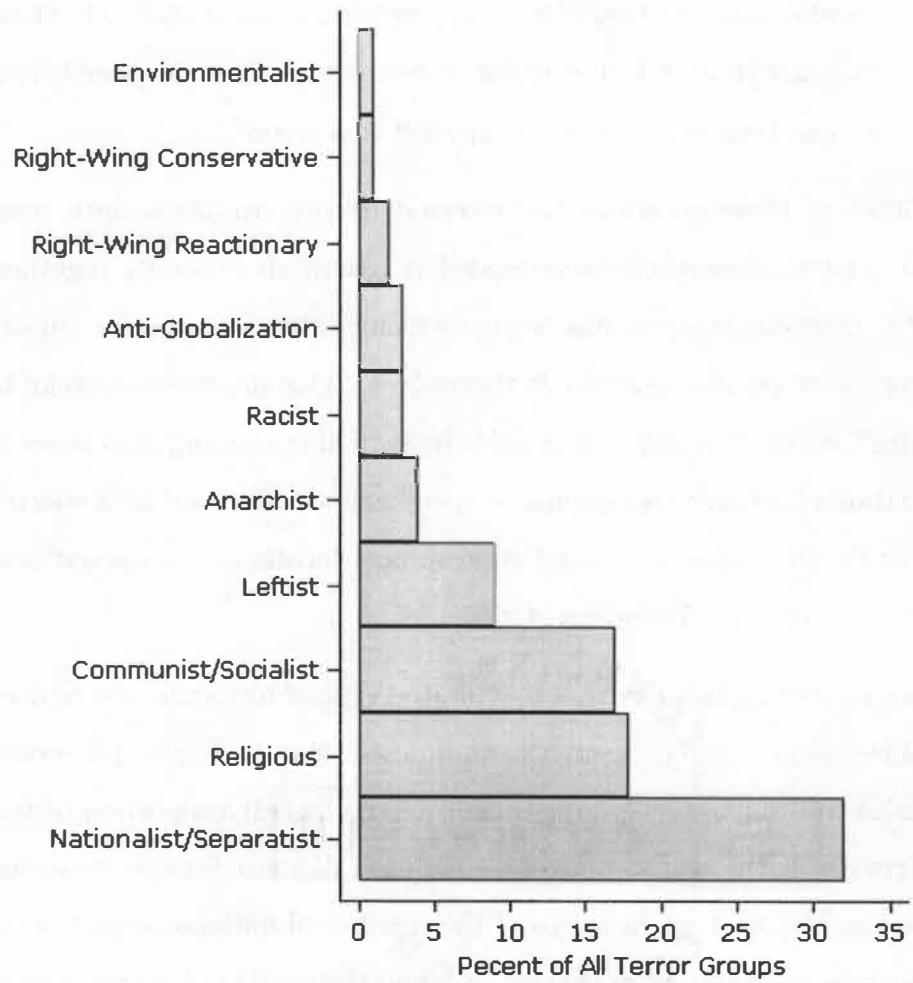
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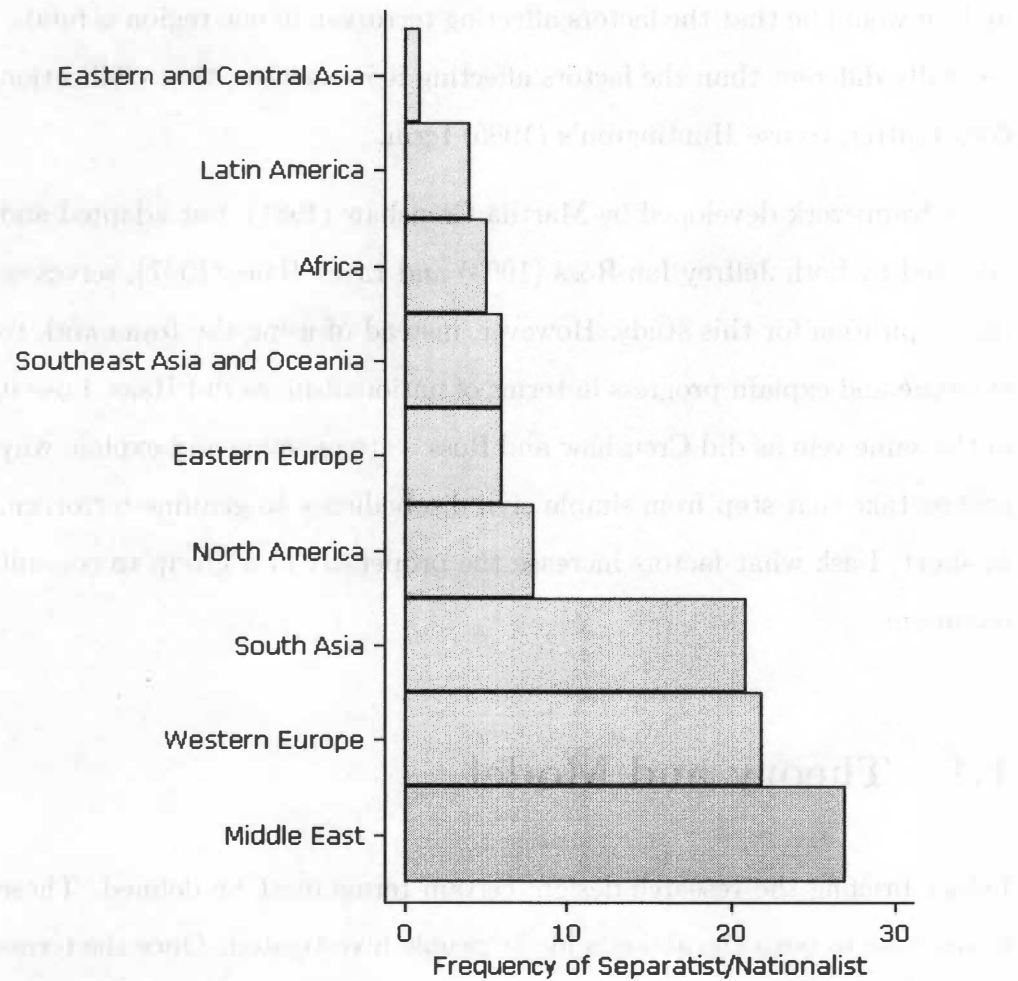
Figure 1.4: Global distribution of nationalist and separatist terror groups in the world.

groups is far from zero (see Figure 1.5).[4] As such, circumscribing the universe in this manner arguably limits the applicability of the research little. And, should the results not be generalizable to the world, then a further finding would be that the factors affecting terrorism in one region is fundamentally different than the factors affecting it in another, that civilization does matter, to use Huntington's (1996) term.

A framework developed by Martha Crenshaw (1981), but adapted and adopted by both Jeffrey Ian Ross (1993) and Ernst Haas (1997), serves as the inspiration for this study. However, instead of using the framework to examine and explain progress in terms of nationalism, as did Haas, I use it in the same vein as did Crenshaw and Ross — to examine and explain why groups take that step from simple civil disobedience to genuine terrorism. In short, I ask what factors increase the propensity of a group to commit terrorism.

1.1   Theory and Model

Before briefing the research design, certain terms must be defined. These terms refer to both the action and the people investigated. Once the terms are defined, a brief examination of the four levels of analysis is undertaken. After that, a logical categorization of conditions is explored. Finally, the research design, including statistical models, is briefly examined.

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[4]It is also interesting to note, and I further expound on this point, that Western Europe is far from immune to terrorist groups, even with its history of liberal democracy (see Figure 1.6) (MIPT Terrorism Knowledge Database 2002).
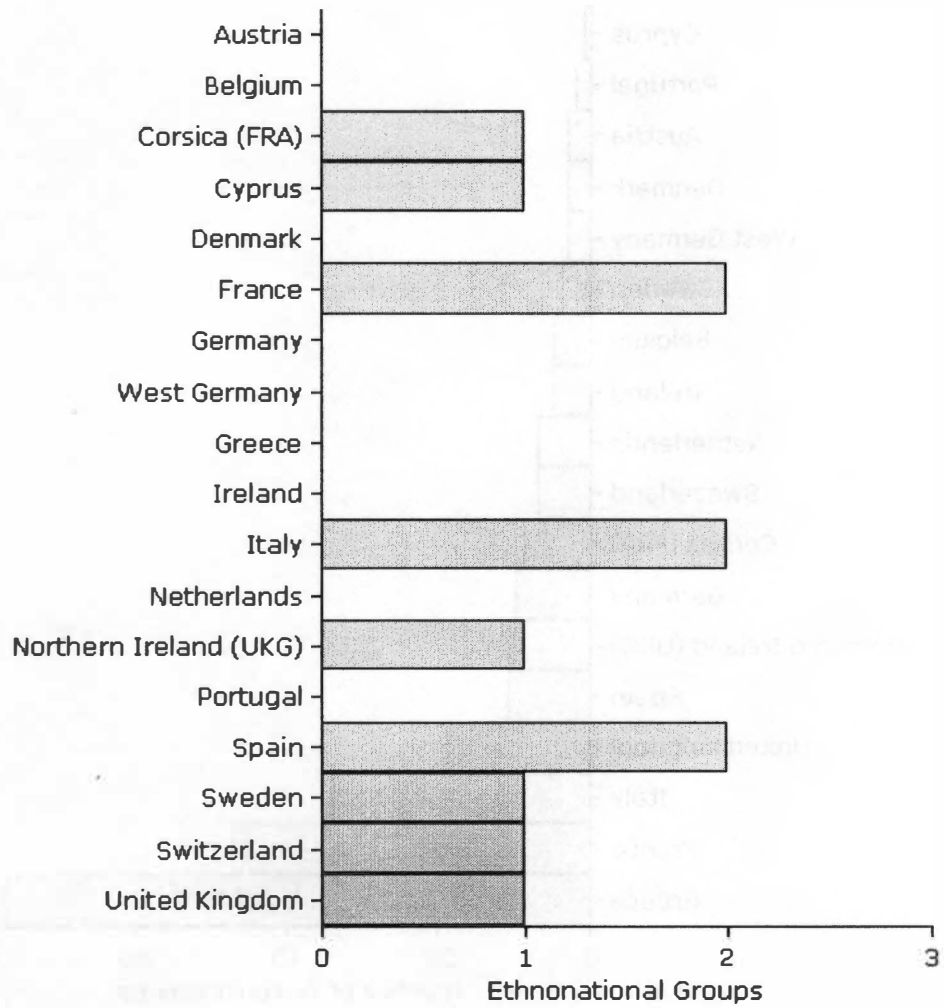
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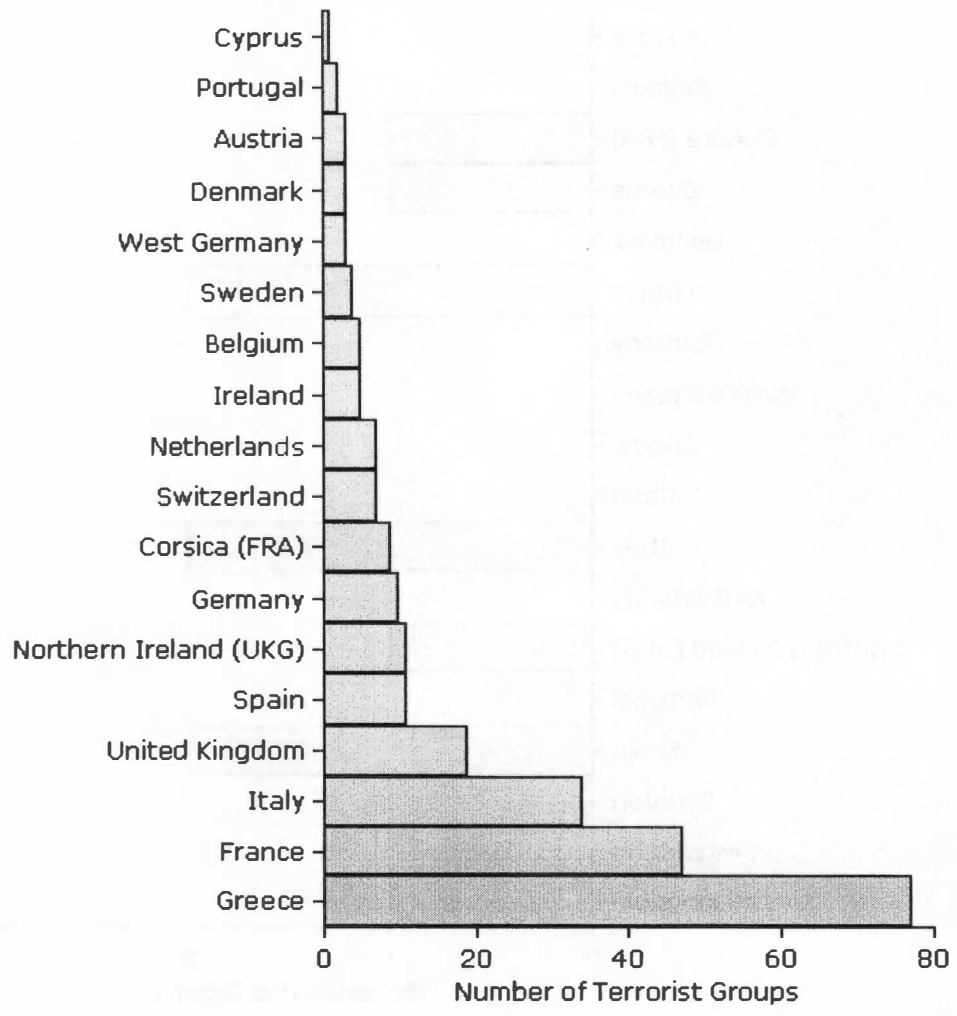
Figure 1.6: The total number of terrorist groups in Western Europe, 1945-2005.

1.1.1 Terror, Terrorism, and Terrorists

As discussed earlier, researchers have spent many hours and much ink ferreting out a satisfying definition of terrorism. Four definitions are quickly sketched in this section. This section does not attempt to definitively define terrorism in a universal sense; it merely seeks to set the stage for further examination of what such a definition would entail.

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). This definition places an emphasis on coercion. A person is a terrorist based upon his/her purposes, not just the methods he/she uses. The definition used by the FBI is similar in emphasis, but adds a clause about the legality of actions.[5] The only major difference between these two definitions is the emphasis on the illegality of actions. The US State Department includes a third aspect in its definition, that of the noncombatant.[6] 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" (Hull 2001). The Department of Homeland Security uses the most comprehensive definition of terrorism of these four (see, for example, The Homeland Security Act of 2002, §2 ¶15).

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[5]This is the definition created by the Foreign Intelligence Surveillance Act of 1978. 50 U.S.C. §1801, (c) (1) and (2), 1982.
[6]22 U.S.C. §2656, (f)(d).

Each definition emphasizes certain aspects of terrorism. The State Department emphasizes the targets of terrorism, but precludes the ability of a state to be a terrorist. The Department of Defense emphasizes the goals. The Federal Bureau of Investigation emphasizes legality. The Department of Homeland Security attempts to create an all-inclusive definition of terrorism, focusing on both the individual and their rationale.

The second chapter explores in greater detail the search for a working definition of terrorism. While all four US definitions do have commonalities, they also have important deficiencies covered by the other definitions. Furthermore, even in academic literature, differences between terrorism definitions are legion. The definition used in this research needs to cover the important aspects of terrorism and needs to deal with the uniqueness of ethnonational minorities. Chapter Two ends with a working definition of ethnonational terrorism, based heavily on Schmid (1983).

1.1.2 Four Levels of Analysis

Now that the actions under consideration have been sketched, let us briefly consider the four levels of analysis and the insights each can give to the study of terrorist groups. Chapter Three explores these and the relevant theories in greater detail.

Many of the theories for the individual level of analysis center on psychology and what causes a person to become violent. Is the answer just some psychological deformity or defect? No. The desire to kill, like the desire to live and to love, is deep inside each of us, a part of our very

being. Thanatos, the death instinct, working in concert with our inborn survival instinct, pushes us to commit acts destined to grant us immortality, whether those acts are of great creation or of great destruction (Guggenbühl-Craig 2002).

Beyond the inborn drive for immortality, there are a number of external factors which encourage us to act in certain ways — even violent ways. Gurr (1970) referred to these factors in his rendition of the theory of relative deprivation. They include any form of differential between one person and the next. As seen later, when these differentials are based on in-group/out-group dynamics, they become even more potent.

At the group level, four broad theories of conflict present themselves: Ethnic Competition Theory, Ethnic Segregation Theory, Uneven Development Theory and Relative Deprivation Theory. The first of the four, Ethnic Competition Theory, asserts that ethnic conflict comes from groups competing for the state's resources (Medrano 1995). With limited resources available, the competition breaks out along ethnic lines. One result of this is that conflict between ethnic groups should occur more frequently when the groups interact than when they are separate (Bélanger and Pinard 1991; Tilly 1991). Ethnic competition may also result from occupational desegregation, as the ethnic groups would then be competing for the same employment positions. Susan Olzak (1992) showed that such economic desegregation did lead to a greater level of ethnic conflict, at least in the United States between the years 1880 and 1920.

Ethnic Segregation Theory asserts the opposite — ethnic conflict comes from one group segregating itself from the others (Medrano 1995). This

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segregation can be physical (movement to ghettoes) or economic (one ethnonation inhabiting only one employment sector). In either case, both ethnic cohesion and an increased probability of ethnic conflict result from limitations on upward mobility, either real or perceived (Gellner 1983; Hechter 1999).

The third, Uneven Development Theory, specifies that when an ethnonation is regionally concentrated, as are the Basque in northern Spain, then there is a greater chance for them to display ethnonational sentiment, as that region will probably be either economically advanced or economically retarded when compared to the rest of the state (da Silva 1975). Economically advanced groups will see the rest of the state as pulling them down, whereas economically regressed groups will see the rest of the state as retarding their possible growth — often to the point of internal colonization. This leads to the counter-intuitive conclusion that agitating groups may, in fact, be richer than the rest of the state (Medrano 1995).

Finally, Gurr built on previous relative deprivation theories. He combined economic and political repression in a general explanation of why certain groups rebel against the authority of the central government. For Gurr, the basic reason is relative deprivation; i.e., there exists a gap between value capabilities and value expectations. Gap growth is vital to Gurr's theory. As long as groups do not have expectations too far above what they receive, there is no great impetus to rebel. However, when the group sees the gap grow greater, they resolve into action (Gurr 1970).

Theories at the state level of analysis involve the effects of regime type and strength on the behavior of groups. Crenshaw (1981) concluded that

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democracies should have a higher probability of experiencing domestic terrorism than should non-democracies. She bases this counter-intuitive finding on the fact that democracies are less willing and less able to exert the controls necessary to control their citizens in a way that effectively eliminates the ability of terrorist groups to operate freely. The empirical evidence supports these contentions (see Chapter Three). Moreover, free states have a free media, which is an important, if not necessary, component to successful terror campaigns, for the knowledge of the terrorist event must be transmitted before the terror can spread amongst the citizenry. Furthermore, such results are magnified in the presence of international news media (Burton 1985; Nash 1995).

Finally, the system level examines the effects of the increased interactions between the states, the increased levels of media penetration, and the increased rates of change in the employment sectors. Globalization theories suggest that increased interaction between the states and lower transportation costs should result in a sometimes catastrophic change in employment. That is, as transportation costs drop, states tend to specialize in what they produce. As a result, those who worked in sectors not related to the specialization are at a greater risk of unemployment (Kellner 2002; Krugman and Venables 1995).

1.2 Framework for Analysis

Now that the action is defined as well as some background for the causes of ethnic conflict provided, the framework for this study can be erected.

Martha Crenshaw (1981) developed a framework for examining the conditions that led to outbreaks of terrorism in a state. Later, Ian Ross (1993) expanded upon that framework, and Ernst Haas (1997) recast it to examine the conditions necessary for progress to occur in social collectivities, especially vis-à-vis nationalism. In each of these works, the researcher posited that there existed necessary and trigger conditions crucial for the event under study to take place (terrorism for Crenshaw and Ross, social evolution for Haas). It is upon this scaffolding that I begin my search for an effective theory of terrorism.

A necessary condition is one that must be in place for the result to occur. Contrast this with sufficient conditions that cause the result by themselves. An example should demonstrate the differences between the two. In terms of current terrorism models, necessary conditions include those conditions that must be in place for terrorism to occur. Crenshaw (1981) referred to them as permissive conditions. In this category, she included such items as weak central state and modernization. In addition to these two, Ross (1993) includes geographical location. All of these factors must be in place before terrorism can occur. They are necessary for the commission of terrorist acts.

Trigger conditions are a subset of the necessary conditions. They become sufficient when certain other necessary conditions are met. However, there is a fundamental difference between necessary and trigger conditions. Necessary conditions are steady-state, background conditions, whereas trigger conditions are events. For instance, a high crime rate is a background condition, whereas the assassination of a popular leader

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is a trigger event. The existence of an ethnonational group is a necessary condition, but a split in the representative body of that group is a trigger event. (Crenshaw 1981, Ross 1993)

As necessary conditions are those steady-state conditions existing prior to the effect, they will tend to be living conditions, historical conditions, and other 'background' conditions that do not rapidly (or often) change. But what conditions should be examined? The model of terrorism proposed in this paper produces several expected indicators of increased terrorism risk. Among these are ethnic differences, the level of democracy in the state, and the percent of youth in the state.

Chapter Four lays out the actual theory of terrorism — the Pressure Model of Terrorism — based on the concepts of action pressure and a weak rational choice model. Creating this model forced a re-examination of trigger conditions as conceptualized by Crenshaw (1981), Ross (1993), and Haas (1997). It is quite clear that the trigger conditions cited for causing terrorism campaigns are triggers only because terrorism followed and not because of any inherent properties of the event itself. In fact, to support theories based on trigger conditions, much selective parsing of the historical record had to take place.

For instance, which of the following was a trigger event in the history of the South Tyroleans? Was it separation from Austria (and the North and East Tyroleans) at the end of World War I; legislation designed to eliminate the South Tyrolean nation in Italy in the 1920s; attacks on the South Tyroleans by Italian Fascists during the 1930s; refusal of Hitler to annex South Tyrol into the German state after the Anschluß; refusal of the United

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States to recognize South Tyrolean claims to national self-determination after both World Wars; or the failure of the United Nations to force Italy into granting them more autonomy? Apparently, at least according to current 'trigger' theories, the answer is the last; "The Bombings" occurred shortly after Austria, Italy, and the UN failed to reach agreement on Tyrolean autonomy. In other words, the last is the trigger condition because the terror campaign shortly followed it.

1.3 Methods

This study examines the ethnic minorities in Western Europe to determine what factors encourage (and discourage) ethnonations to make the move to the use of terrorist tactics in their attempt to attain what they feel they should have. This reduction of the universe of discourse is done for several reasons. First, the ethnic minorities examined (indigenous people, ethnonational minorities, and national minorities) constitute what this author considers one fundamental grouping of proto-terrorists.[7] That is, this group seems to have a different motive for terrorism than the universal group as a whole. Second, the choice of Western Europe was made for two primary reasons. In the spirit of Przweorski and Teune, and Huntington, Western Europe has a shared tradition; hence many of fundamentals that

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[7]Other fundamental groupings include groupings based primarily on religion (e.g., Palestinians in Israel and Kashmiri in Pakistan and India) and ethnic groupings among displaced peoples (e.g., Turks in Germany and the foreign workers in Switzerland).

define a civilization are similar. Also, these countries, a subset of Huntington's Western Civilization, arguably constitute a most-similar system (Huntington 1996; Przweorski, Teune 1970).

Finally, this study is only the first step in the process of discovering the underlying causes of terrorism. In the scientific process, the first step to a generalized theory is to simplify the problem. Instead of finding a theory to cover all types of terrorism in all of the world, this initiates the process by examining a small piece of the picture — the piece that includes ethnonational groups in Western Europe.

Chapter Five sets the stage for a statistical analysis of the available data, exploring the statistical models to be used, along with their strengths and weaknesses. In the end, while the data appear to be survival-time data, and thus best analyzed using survival time techniques, they are not — at least in their current form.[8] In lieu of survival-time analysis, population-averaged cross sectional time series general estimating equations were used, with the appropriate corrections for the expected autoregressive correlation structure. As binary dependent variables require appropriate models, logit, probit, and complementary log-log models are used.

Chapter Six concludes with a discussion of the results as they relate to the PMT model and the hypotheses. Finally, Chapter Seven concludes this *magnum opus* by offering suggestions for policy changes designed to reduce the fundamental risk of terrorism breaking out in states and in groups prone to using it.

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[8]When, and if, a working theory of trigger events is created, then event history analysis can be utilized in the study of what affects terrorism. Until that point, unless one assumes that only global factors matter, event history analysis cannot be performed.

Let us end this chapter at the beginning — with ethnonational terrorism and its primary impetus — national self-determination. Nationalist struggles have existed from the beginning, but it was not until the early twentieth century that national self-determination became the watchword. The end of World War I saw Wilson's Fourteen Points express to the world its importance. As a minor member of Wilson's cabinet, future-president Franklin Roosevelt never forgot the idealism Wilson represented, the vision that he saw for the future of the world. As such, the Atlantic Charter, a description of what the post-World War II world should look like, drawn up between Churchill and Roosevelt, reiterated and reclarified Wilson's sentiments. The United Nations charter, written less than a decade later, further echoed it. Ethnic groups around the world have heard and responded to it, dreaming of national self-determination. And yet, when the final decisions have been made, self-determination was sacrificed to power politics and expediency (Moynihan 1993).

In fact, the idealism of the Fourteen Points did not even survive the end of the Great War. The ninth point stated, "A readjustment of the frontiers of Italy should be effected along clearly recognizable lines of nationality." The end of the war did see an adjustment in the borders of Italy and Austria — the Tyrolean Alps south of the Brenner, the upper Adige River basin — became Italian land, even though the inhabitants were not Italian. They were Tyrolean and Ladin. In dismembering the Austria-Hungarian Empire, the victors of the War to end all Wars sacrificed the Tyroleans on the altar of security (Alcock 1970; Steininger 2003).

On the other hand, historic borders have also served as the primary rationale for denying many nations their autonomy.[9] This is as true of the Jurassiens and the Bretons as it is of the Basques of Spain and France. While the Basque kingdom of Navarre prospered for much of the Middle Ages and, in fact, gave to France their King Henry IV (the first of the Bourbon dynasty), that did not keep France and Spain from dividing the Basque homeland (*Euskal Herria*) between the two states. The recent Basque calls for autonomy went largely unheeded because the Basque lands have been traditionally divided between the two states, and, although the Basques do have a large measure of autonomy in Spain today, they lack any in France — the three Basque provinces in France (*Iparralde*) are merely a part of the French department of Pyrénées Atlantiques (Collins 1990; Medrano 1995).

History casts a slightly different light on the Irish difficulties. The Irish have their own troubles and have had "The Troubles" since 1969 when the civil rights movement for Roman Catholics turned violent. The English first invaded Ireland before England spoke English — in 1160. During the next seven and a half centuries, England ruled the island with

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[9]The drawing of the borders in Europe at the close of both the Napoleonic era and of World War I created several ethnic minorities without self-determination. The number of groups at risk has varied since the close of World War II due to population fluctuations and internal achievement of autonomy. Compare the number of groups operating in democratic states (Figure 1.7) to the number of groups using terrorism (Figure 1.8) in the post-World War II era. These support Crenshaw's contention that democracy is a necessary condition for terrorism (1981).

Furthermore, comparing Figure 1.8 to the smoothed survival-time non-parametric baseline hazard function in Chapter Six demonstrates the strengths of the other variables in the model through the differences in the graphs. Thus, during the early 1980s, when the hazard function was near zero, the other covariates were at their highest, thus creating the high rate of terror activity in the 1980s (Minorities at Risk 2002).
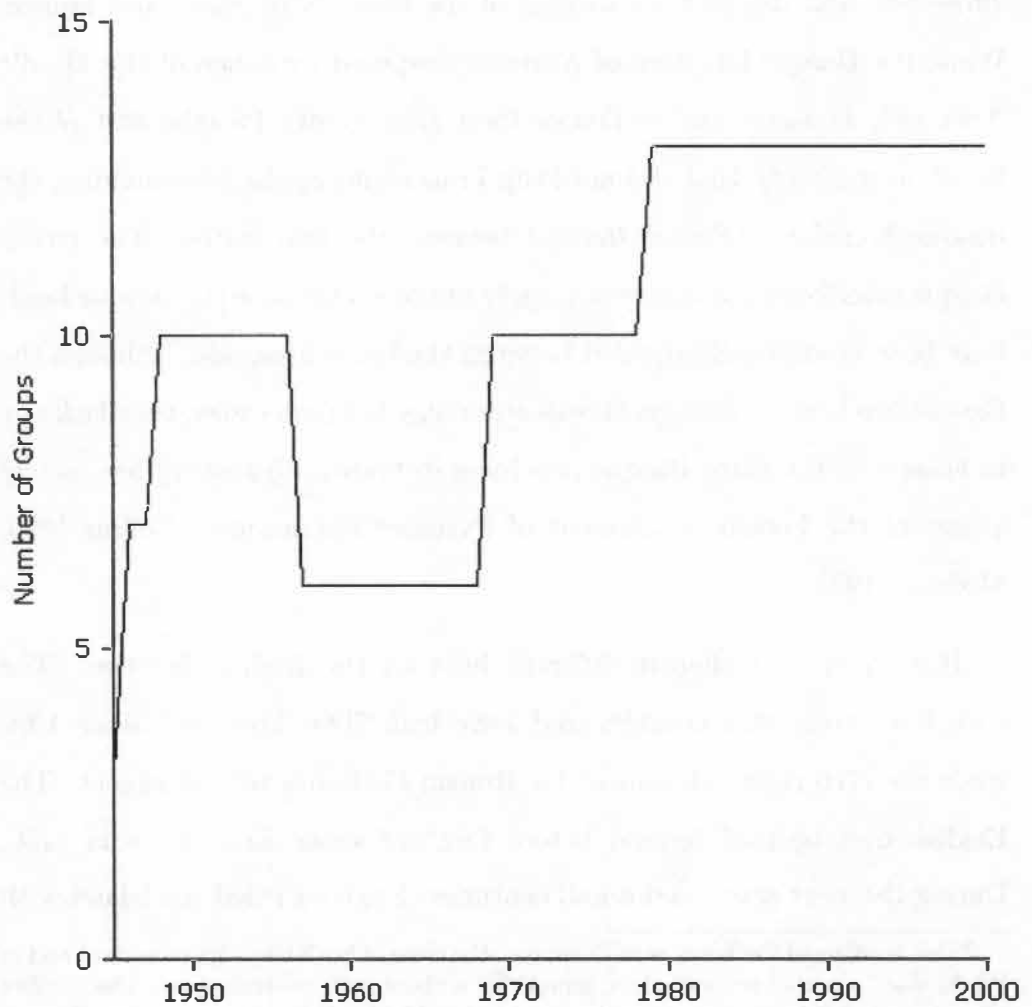
Figure 1.7: The number of ethnonational groups operating in Western European democratic states, 1945-2000.
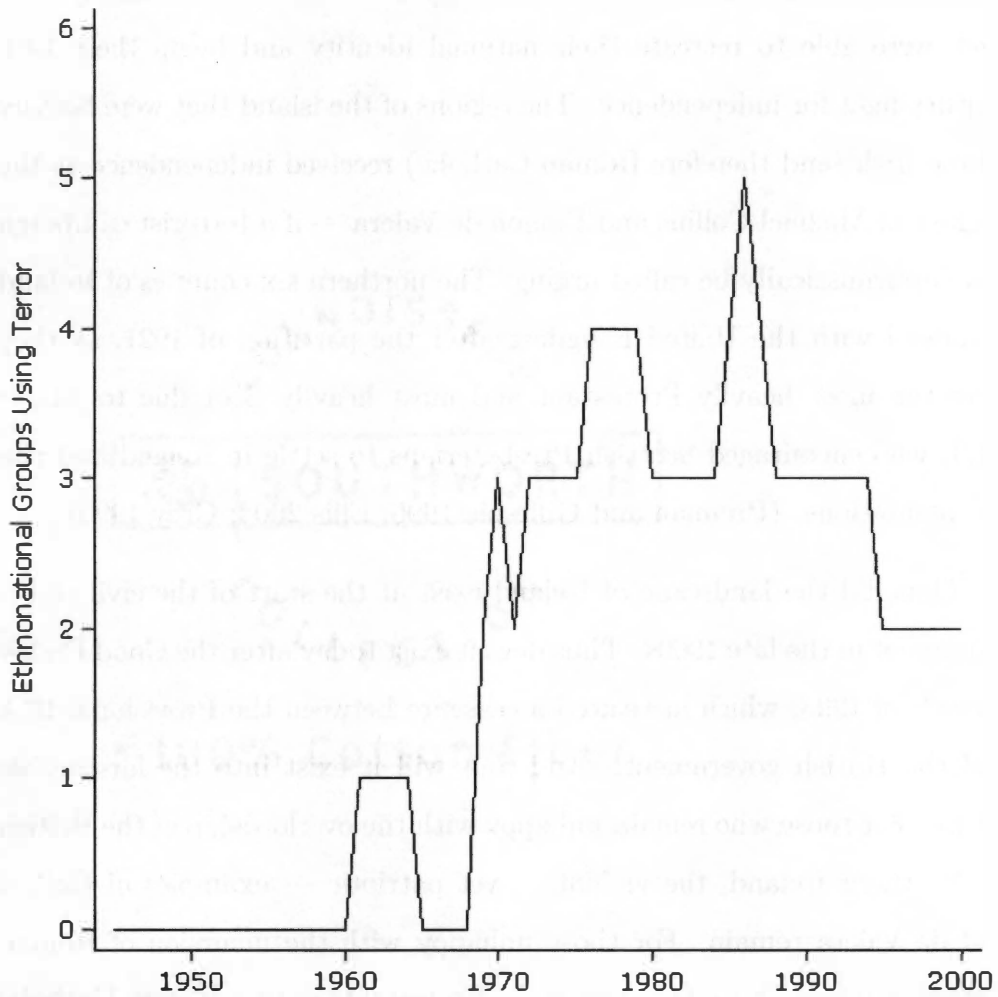
Figure 1.8: The annual prevalence of number of ethnonational groups using terrorism, 1945-2000.

varying degrees of ability. The plantations created by King James VI/I, and Queens Mary Tudor and Elizabeth further Anglicized Ireland. And yet, even with this incredibly long history of subjection to England, the Irish were able to recreate their national identity and begin their 19th century fight for independence. The regions of the island that were heavily ethnic Irish (and therefore Roman Catholic) received independence at the urgings of Michael Collins and Eamon de Valera — if a terrorist campaign can euphemistically be called urging. The northern six counties of Ireland remained with the United Kingdom after the partition of 1921, as they were the most heavily Protestant and most heavily Scot due to James VI/I, who encouraged Scottish Presbyterians to settle in Ireland and run the plantations. (Brennan and Gillespie 1996; Ellis 2004; Gray 1995)

Thus did the landscape of Ireland exist at the start of the civil rights movement in the late 1960s. Thus does it exist today after the Good Friday accords of 1998, which instituted a ceasefire between the Provisional IRA and the British government. And thus will it exist into the foreseeable future. For those who remain unhappy with the overlordship of the British on Northern Ireland, the violent — yet patriotic — examples of Collins and de Valera remain. For those unhappy with the incursion of Roman Catholics into a Protestant region, or Protestants onto a Roman Catholic island, the actions of the Normans and Tudors, and every Parliament since, still haunts.

These are just four of the groups used in this research. The others are the Bretons and Corsican of France, the Scots of the United Kingdom, the Catalans of Spain, the Jurassiens of Switzerland, and the Sardinians

of Italy. All ten groups have their own story, their own history. It is this history that sets the backdrop to their actions, that gives a purpose to it. While Smith (1988) denies the reality of the nation, he does not deny its effects on the people. The sins of the past truly are visited on the sons of today in the form of grievances against the state by the nations and in the form of terrorist actions.

Bygone decisions, like old sins, cast long shadows.

Chapter 2

Ethnonational Terrorism

> We need to know what causes
> terrorism and how to stop it.
>
> Eqbal Ahmad

ACRES upon acres of trees have died to furnish the paper used in the search for a single, universal definition of terrorism. While the League of Nations proffered the first official definition of terrorism in 1937, no universally-accepted United Nations definition currently exists (UNODC 2000). Furthermore, no single universally-accepted definition exists in the American government — it utilizes no fewer than four different definitions. Academics are just as inconsistent when it comes to defining terrorism; each researcher tends to use his or her own definition, emphasizing the aspects of terrorism that particular researcher desires to emphasize. Is a cursory tackling of its current definitions yet more intellectual onanism, or

is there genuine value to the undertaking? While there are several superior surveys of definitional problems inherent in the term (see for example Crenshaw 1981; Gambill 1998; Gibbs 1989; Schmid 1983; Thomas and Standley 1988), I find myself engaging in this enterprise for the simple purpose of creating and presenting a theoretically sound definition of a specific subset of terrorism — ethnonational terrorism — and showing how it fits in with other definition. As such, necessity forces me to first discuss the difficulties inherent in science pilfering a highly-politicized word for its own, especially vis-à-vis the problem of the freedom fighter.

2.0.1   Freedom Fighters?

Whenever discussing terrorism, a priority should be given to defining what the author means by terrorism, since political scientists, sociologists, politicians, and journalists have all proposed, and employed, a whole host of starkly different definitions. There is little agreement within the disciplines, even less among them.

Politicians and the media are known for using language as a tool to evoke predictable emotions and produce desired responses among the populace. In doing this, they delineate and shape the arena of discussion about a topic. They may even be able to completely eliminate any realistic possibility of rational public discussion about it. Today, no one in public life debates the relative merits of terrorism and terrorist activities. Anything labeled 'terrorism' in the West is automatically equated with anti-Good,

anti-Americanism, and anti-Western civilization — a sort of political de-monizing (Thomas and Standley 1988). Were the United States and its allies not sponsors of terrorism, or what some may define as terrorism, there would be few problems with this — at least within the American system. However, with her history, America is susceptible to the charge of hypocrisy, as American foreign policy did (and perhaps does) encour-age rebels fighting against governments unfriendly to the United States — rebels often termed terrorists by those very states.[1] Without changing the 'public' definition of terrorism, the American leaders, notably Ronald Reagan, have given tacit approval to terrorism when it helps a friend or hurts a foe. One of the more famous of aphorisms is, "One man's terrorist is another man's freedom fighter." Used by politicians to give credibility to both covert and overt military action, this maxim speaks to the Amer-ican vision of the embattled revolutionary trying desperately to cast off the yoke of a tyrannical government. Unfortunately, all rational debate seems to be lost once you axiomatically exclude freedom fighters from the definition of terrorists. Further, any discussion quickly reduces to a mere 'point of view' argument (Sederberg 1995). Fortunately, social scientists do continue studying terrorism, its causes, and its effects. Unfortunately, cre-ating a universally-accepted definition for such a politicized term is hardly painless.

Why should the time and effort be expended to create a definition of terrorism? Could it simply be that terrorism is like Justice Stewart's pornography — indefinable, except on an I-know-it-when-I-see-it level?

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[1]Examples include the Contras in Nicaragua, the Mujāhidīn in Afghanistan, and UNITA in Angola.

This might explain why no single definition of terrorism has gained widespread use. However, finding a single, universal definition of terrorism is important. I would argue that it is the most important thing we can do.

The battles waged over what to include and what to exclude in the definition, and the effort undertaken to defend those boundaries, demonstrate its paramount importance. Authorities at the highest levels wrangle over the definition. Government responses are all but dictated by the definition. World leaders block summits because of the definition.

A case in point: When Senator Lieberman and a representative of the PLO discussed the possibility of talks between the two countries,

> Liebermann [sic] invoked the "terrorist" acts of the PLO leader as a block to talks; the PLO representative stressed Israeli military violence against "women and children." He wanted this violence categorized as "terrorism," which Liebermann [sic] consistently resisted. (Paletz and Boiney 1992: 24)

Both sides understood the primary importance of that definition, of its implicit and often explicit moral connotations, and automatic moral repugnance and condemnation.

2.1   Terrorism, Towards a Definition

While it is true that there is a moral connotation to the term 'terrorism', especially as we now use it in public forums, we cannot allow that fact to

stop us from creating an appropriate definition. Yes, the term terrorism has been use to instill hostility, hatred, and fear, and to elicit predictable responses from the citizens of various states. Regardless, we can still achieve a definition for terrorism in accord with social science practices and requirements, while leaving the political definition to our elected (and unelected) authorities (Schmid 1983; Thomas and Standley 1988).

To give the reader a point of reference, let me present my working definition of terrorism so that one can compare it to other definitions used and to other definitions discussed in this chapter. Here, I define ethnonational terrorism as:

> An anxiety-inspiring method of repeated violent action, employed by groups, for the expressed purpose of increased autonomy for their historical homeland, whereby the direct targets of violence are not the main targets. The immediate human victims of violence are generally chosen randomly or selectively from a selected target population, and serve as message generators. Threat-based and violence-based communication travels between the terrorist organizations, its victims, and its main targets, thus turning the target into a target of terror, a target of demands, or a target of attention, depending on whether intimidation, coercion, or propaganda is primarily sought.

This definition is a minor reworking of Schmid's (1983) effort on creating a universal definition. The only changes are those that restrict the definition to ethnonational groups and aims and to include the possibility of

symbolic inanimate objects, like the World Trade Center in New York, as legitimate targets of terrorist events. How does this definition compare to other definitions used in the literature? Perhaps more importantly, how does this definition compare to those used by the US government?

2.1.1 The Law

Two criticisms of the legal definitions of terrorism center on their great variations and their egocentric motivations. A recent book discussing the effort of the United Nations and other international bodies to create an acceptable definition of terrorism lasts three volumes and over 1,800 pages — without reaching a conclusion. The United Nations has passed several resolutions against terrorism, but it has yet to define what it is resolving against (Whitaker 2001).

During the aftermath of the September 11, 2001 terror attacks, the UN Security Council adopted Resolution 1373, which required states to take steps to combat terrorism. Unfortunately, what is and what is not terrorism has yet to be defined by the UN. Even more interesting, thirty-two years have passed since the time that the United Nations first stated that finding a definition for terrorism was crucial (Thomas and Standley 1988). Why has the United Nations failed in defining terrorism? Perhaps it is the knowledge that the United States has vetoed every Security Council resolution condemning the actions of Israel and that any usable definition of terrorism would most likely include some actions of the Israeli government. For example, are the Palestinian suicide bombers terrorists? Or, was the

assassination of Muslim religious leader Sheik Ahmed Yassin by Israel a terrorist act? According to the definition I use, the answer to each is Yes.

While the United Nations has yet to formulate any definition of terrorism, the United States has no fewer than four official, legal definitions of terrorism, each including and each emphasizing different aspects of terrorism. The US Department of Defense, as stated in the Field Manual of the US Army, 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 used by the FBI is similar in emphasis, but adds a clause about the legality of the individual's 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 policy or conduct of a government or political subdivision of a government by intimidation or coercion.[2]

The US State Department defines terrorism as, "premeditated, politically motivated violence perpetrated against noncombatant targets by subnational or clandestine agents, usually intended to influence an audience" (Tucker 2000: 10).[3] Finally, created in the wake of the September 11, 2001 terrorist attacks, the Department of Homeland Security defines terror as

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[2] This is the definition created by the Foreign Intelligence Surveillance Act of 1978, as amended in 1982, 50 U.S.C. §1801, (c) (1) and (2), 1982.

[3] This is the definition found in Section 140 (d) (2) of the Foreign Relations Authorization Act, 1988, and also found in 22 U.S.C. §2656 f (d) (2).

... any activity that: (A) involves an act that — (i) is dangerous to human life or potentially destructive of critical infrastructure or key resources; and (ii) is a violation of the criminal laws of the United States or of any State or other subdivision of the United States; and (B) appears to be intended — (i) to intimidate or coerce a civilian population; (ii) to influence the policy of a government by intimidation or coercion; or (iii) to affect the conduct of a government by mass destruction, assassination, or kidnapping. (Homeland Security Act of 2002, §2 ¶15)

Why so many definitions? Why do they differ so much? Each definition conforms both to the needs of the agency and to the conditions of the world at that time. The two earliest definitions are unsophisticated and simple because those definitions were most clear and concise, and because the shades of meaning were unimportant to those agencies. The State Department definition shows greater complexity due to its need to deal with other countries from their perspectives. Oddly enough, however, the State Department definition is the only one that stipulates that terrorist acts must be carried out by non-state actors. In other words, terrorism cannot, by the State Department's definition, be performed by a state. The definition from the Department of Homeland Security is the most extensive, yet it is also the most US-centric; an act that would not break a US law cannot be termed terrorism. However, it is encouraging to note that state-sponsored terrorism is once again included in the definition.

The policy objectives in the Department of Defense definition, the focus on the legality in the FBI definition, the aspect of noncombatants in the

State Department definition, and the re-inclusion of the state as a possible terrorist in the Homeland Security definition are all important characteristics of terrorism. Even the proposed United Nations definition of terrorism includes these four aspects.

> ...reiterates that criminal acts intended or calculated to provoke a state of terror in the general public, a group of persons or particular persons for political purposes are in any circumstance unjustifiable, whatever the considerations of a political, philosophical, ideological, racial, ethnic, religious or other nature that may be invoked to justify them. (GA Res. 51/210, 1996)[4]

Thus, it appears that the leaders of the world are beginning to find that elusive definition, after these long decades.[5] However, as with most things political, compromises must take place. Add to this the alleged inherent immorality of the terrorist action, and those world leaders with the power to do so will ensure that their actions are not labeled terror. Thus, it falls to the social scientist to create a definition of terrorism that lacks moral imperatives, one that applies to both allies and enemies.

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[4]An interesting aside here is that this definition would agree (at least at *prima facie*) that both the Palestinian suicide bombers and the assassination of Sheik Ahmed Yassin by Israel were terrorist acts.

[5]Alternatively, the convergence may never be reached because policy space is effectively infinitely divisible and subject to the constraints of Zeno's Paradox of the Dichotomy.

2.1.2   The Social Scientists

Social science definitions for terrorism are not infrequent. While not the first political scientist to make an attempt at defining terrorism, Schmid (1983) offered one of the best early analyses of the myriad definitions. After examining over 100 definitions in use, reaching back to 1936, he discovered they contained more than twenty-two separate elements. Synthesizing sixteen of those elements, Schmid then fashioned his own definition from that list, emphasizing the five most important aspects of terrorism (Kushner 1998). Terrorism is

> . . . an anxiety-inspiring method of repeated violent action, employed by secret clandestine individuals, groups, or state actors, for idiosyncratic, criminal, or political reasons, whereby — in contrast to assassination — the direct targets of violence are not the main targets. The immediate human victims of violence are generally chosen randomly or selectively from a target population, and serve as message generators. Threat- and violence-based communication processes between terrorist organizations, victims, and main targets, turning it into a target of terror, a target of demands, or a target of attention, depending on whether intimidation, coercion, or propaganda is primarily sought. (Schmid 1983: 28)

There are several interesting facets of this definition that need to be mentioned, especially as Schmid's definition serves as the basis of my own

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definition. First, this definition requires that the action be repeated. In other words, an act is a terrorist act only if it is a part of a campaign. This makes logical sense, as terror may be induced by one act, but it takes a repeat, or a credible threat of a repeat, before goals can be achieved.

Second, according to this definition, states may be guilty of using terrorism; that is, they are not automatically excluded from being designated terrorist. The State Department definition did not include state terrorism in their definition. Schmid's definition does. Furthermore, Schmid's definition includes both individuals and collectives. Thus, there is less focus on who does it and more focus on what was done and why. This is important; focusing on the act allows people to negotiate with the actors, thus allowing for a non-military solution. Focusing solely on the actors restricts allowable options (Sederberg 1995).

Third, the range of defined terrorist actions is quite large. They include reasons beyond just the political. Again, Schmid emphasizes the act and how it affects the targets. Terrorists can have any of a number of reasons. For Schmid, the act of terrorism is defined more by the results than by the ultimate goals.

Fourth, Schmid acknowledges the difference between direct, indirect, and main targets. Direct targets are those immediately affected by the terrorist act. Indirect targets are those who are supposed to feel the terror from the event. The main targets are those who have the power to grant the goal sought by the actor(s). Thus, the al Qaeda attack on the American embassies in Kenya and Tanzania had the embassy workers in Nairobi and Dar es Salaam as the direct targets. The American embassy employees

working in vulnerable embassies were the indirect targets. President Clinton was the ultimate target, who al Qaeda hoped would remove American forces from Saudi Arabia.

Finally, as a result, the immediate targets are chosen for what they represent rather than what they do. From within the representative categories, the targets may be chosen randomly or selectively. Either specific members of that representative group are targeted, or the terrorist attacks whoever is there. In other words, the immediate targets are chosen for the message the action creates. This message comes from the choice of direct target, their place within the population of the indirect target, and their relationship to the ultimate target.

While Schmid has created an acceptable working definition of terrorism, there are some weaknesses involved that others have pointed out, and with which I concur. Schmid specifies that the acts are perpetrated against persons, not things. Thus, blowing up the Statue of Liberty or destroying the Pentagon would not be a terrorist act for Schmid, per se, even if all other aspects were present. As all actions of the Animal Liberation Front and the Weather Underground were against property, they would not be considered terrorist groups by Schmid's definition. And yet their actions created a feeling of terror in those affected. Inclusion of symbolic objects would increase the accuracy and applicability of this definition (Ross and Gurr 1989).

Moreover, Schmid allows for the direct targets to be chosen either specifically or randomly. I suggest that the targets are both specific and random. Returning to the Nairobi and Dar es Salaam bombings, these

embassy workers were both selected and random. Al Qaeda selected them from the total pool of all humans because American embassy worker deaths would cause terror among other American embassy workers. Thus, the indirect targets were also selected. Once the general category was chosen, Nairobi was selected because al Qaeda felt they could successfully accomplish the undertaking. Finally, the workers who were killed were random members of that endangered, selected community.

Beyond these few changes, Schmid's definition of terrorism stands. However, it adds things that are irrelevant to ethnonational terrorism. To see this, let us first define what is meant by ethnonational and then conclude this chapter with the working definition of ethnonational terrorism.

2.2 Ethnonational

The previous section dealt with creating a substantively acceptable definition of terrorism, the action examined. This section deals with the actors. As this research uses the Minorities at Risk dataset, the definitions used for these groups mirrors those used by the Minorities at Risk project.[6] However, for the purposes of this dissertation, I am using the term "ethnonational" in a way that is slightly different from how the Minorities at Risk Project defines it. In this research, "ethnonational" will be used as

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[6]All definitions come from "Types of Minorities at Risk Groups" (Minorities at Risk 2004). All examples come from the MAR dataset, version 1.03 (2002 data), which was retrieved using the MARGene program, which can be downloaded from the Minorities at Risk Project homepage: http://www.cidcm.umd.edu/inscr/mar/.

an umbrella term that includes all indigenous peoples, ethnonationals, and national minorities as defined by the Minorities at Risk Project.

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, to be at risk, the minority "collectively suffers or benefits 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. Thus, the Sámi of Scandinavia is not included as it does not reach the population requirements, nor are the Cornish included as they are not systematically discriminated against.

As mentioned earlier, I unite three of these categories — ethnonationals, ethnic minorities, and indigenous peoples — into one. I contend this is appropriate, as these three groups share a similarity at a fundamental level — their primary motivation. Thus, it makes sense to speak of the three Minorities at Risk categories as merely three aspects of the same underlying category.

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" (Minorities at Risk 2004). Western Europe has few remaining indigenous groups, and none of these groups

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is considered a minority at risk. Examples include the Sámi of Lapland and the Nentsy of Siberia. On the other hand, the Spanish and French 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; they live much as do their neighbors — the modern Spanish and the modern French. 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" (Minorities at Risk 2004). Some examples of Western European ethnonational populations are the Basques (*Euskadi*) of France and Spain, the Corsicans and Bretons of France, and the Scots in the United Kingdom. The Minorities at Risk project includes the Ulster Catholics in this group, but not without controversy. While fitting other aspects of the definition, the Catholics in Northern Ireland have not had political autonomy, traditional ruler, or regional government in Northern Ireland. They are a segment of the Irish nation who have held little, if any, real power in Northern Ireland. They are better classified as a national minority.

The third category is national minority. 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" (Minorities at Risk 2004). 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? Because 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.

2.3   Ethnonational Terrorism

The primary purpose of this chapter was to define the term "ethnonational
terrorism". Thus far, we have explored several different definitions of ter-
rorism and thoroughly defined the term "ethnonational". All that remains
is for us to combine them. Liberally pulling from Schmid's definition, ad-
justing some of his wording, and altering it to meet the particular demands
of a terrorism definition centering on ethnonational groups, we have:

> Terrorism is an anxiety-inspiring method of repeated violent
> action, employed by groups, for the expressed purpose of in-
> creased autonomy for their historical homeland, whereby the
> direct targets of violence are not the main targets. The imme-
> diate human victims of violence are generally chosen randomly

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or selectively from a selected target population, and serve as message generators. Threat-based and violence-based communication travels between the terrorist organizations, its victims, and its main targets, thus turning the target into a target of terror, a target of demands, or a target of attention, depending on whether intimidation, coercion, or propaganda is primarily sought.

The only major differences between this definition and the Schmid definition are the specification of the ultimate goals of the campaign (increased autonomy for their historical homeland) and the inclusion of inanimate, symbolic targets (e.g. the Louvre and Big Ben).

Three of the four main aspects of terrorism are also retained in accord with the laws: the policy goal of the terrorists, the illegality of the action, and the aspect of the non-combatant. The only missing feature is the exclusion of the state as a possible terrorist actor, and that was done for the obvious reason — the state is not an ethnonation, it is the target of the ethnonational terrorism.

Not all violent events carried out by an ethnonation can be considered a terrorist event. Some conflicts are more intense than terrorism. The guerilla movements in Nicaragua (the *Contras*), Peru (*Sendero Luminoso*), and Nepal (Moaists) are examples of groups utilizing techniques that exceed the definition of terrorism. In each case, rebel armies battle government troops and territory is actually captured. The violent protests in France by the Basques are an example of a group using violence without

making the move to terrorism. While riots have taken place and people injured, the movement has, thus far, eschewed the use of planned campaigns of indiscriminate violence. Furthermore, the recent (November 2005) rioting in France by the Muslim minority is not terrorism, as the movement lacks organization and the level of violence is not great enough. Thus, terrorism fits somewhere between these examples. Territory is not captured and armies are not placed in battle formations in terrorism, but there is a necessary level of organization and direction given by a leader of the movement.

2.4   Chapter Summary

In this chapter, we examined several of the definitions of terrorism for two reasons. First, it demonstrated the importance, and difficulty, in finding the proper definition of such a politically- and emotionally-charged word. Second, it allowed us to see the suitability of my proposed definition of ethnonational terrorism. While this chapter was not intended to be a complete and thorough survey of definitions, it did serve as a brief glimpse into the tortuous intricacies awaiting any scholar in the field of terrorism.

The definition of ethnonational was also covered, and the rationale for merging the three separate categories from the Minorities at Risk project into one category for this research was provided. While the final definition of ethnonational terrorism was substantially based on the definition proposed by Schmid (1988), adjustments for two shortcomings (Ross and Gurr 1989) and for the inherent restrictions of the current topic were made.

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The next chapter discusses the current competing models of the causes of general violence, ethnic violence, and ethnic terrorism. Chapter Four creates the model I will be testing in this research. Pulling liberally from Chapter Three and making appropriate connections, a causal framework for ethnonational terrorism will be created.

Chapter 3

Causes of Violence

> The guilty shall be recognized by their marks, so they shall be seized by the forelocks and the feet.
>
> Qur'an, Sura Al-Rahman: 41

W HILE this research focuses specifically on ethnonational terrorism, it is first necessary to explore causes of ethnic violence in general, as ethnonational terrorism may be but a subset of ethnic violence in terms of causes. While Ross (1993) makes a good argument regarding the possible differences between the causes of ethnic violence and the causes of ethnic terrorism, knowledge of what mobilizes ethnic groups to initiate violence are fundamental to understanding how they take the step to terrorism. One can, and many do, artificially divide the causes of ethnic violence into

four levels of analysis: individual, group, state, and system. The division is logical in that these four levels speak to a different subset of sources of factors. This division is artificial as there is much overlap between the levels. For example, globalization is a systemic factor, but its effects are on the state, the group and the individual. In this chapter, I will examine the four levels of analysis as they pertain to the causes of ethnic violence and terrorism.

3.1   Individual Level

Sigmund Freud theorized that in every human, there is a conflict between Eros and Thanatos (Guggenbühl-Craig 2002: 82). Eros represents love, the love we all have for life and for living. Thanatos represents death, our fascination with it, and our death instinct. For Freud, these two aspects are two sides of the same coin, two parts of an entire person. Carl Jung agreed that the death attraction is the "core of our archetypical shadows" (Guggenbühl-Craig 2002: 82), that each of our ids contains both the suicidal maniac and the murderer. Why else would the major religions of the world forbid suicide and killing? The leaders of those religions recognized these destructive instincts.

However, the death instinct is not our sole instinct. We also thirst for life. Some have cited the survival instinct as the greatest force in life (Lyng 1990: 859). This instinct reaches beyond merely avoiding death. It pushes us to become immortal. Modern advances in medicine have expanded life greatly, but immortality — true immortality — is well beyond the reach of

current medical science.[1] How, then, is immortality gained? First, one can gain it through bearing offspring. These children continue one's genetic line and are, in effect, pseudo-immortality. The continuance of the species seems to be a constant aspect of biological life (Thiele 1999: 7).

Second, one can gain immortality through history. People will often work hard to make a name for themselves so that history will remember them. Some rulers keep an eye to how history will judge them (Schlesinger Jr. 1997: 180; Tugwell 1971: 192), whereas others gain immortality for their acts of notoriety. Scholars may create academic works and reputations to survive the generations.[2] The everyman may gain immortality either through extraordinarily great acts or through extraordinarily horrific acts. For instance, Eric Harris and Dylan Klebold, the shooters at Columbine High School, reportedly committed their crime for the fame. According to Dave Cullen,

> One thread running consistently through [their personal journals] is the desire for glory, the expectation of fame. "Like many of the school shooters, they seem to be expecting some sort of notoriety, in addition to wanting the vengeance." (Cullen 1999)

A second example is the ancient Greek Herostratus, known solely because he purposely destroyed the Temple of Artemis. The reason he gave for destroying the temple, one of the Seven Wonders of the Ancient World,

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[1]True immortality is also beyond the ken of the laws of physics, as it is a violation of the Second Law of Thermodynamics (Lightman 2000: 63).

[2]Thucydides, the author of *The History of the Peloponnesian War* accomplished this, as did Plato, Galileo, Hobbes, and Einstein.

is that he wanted the world to never forget him (Stirnimann 2002: 91). Even the Afghan Taliban may have rested their hopes for eternal fame on the destruction of pagan cultural artifacts.[3]

Finally, eschatology is an important aspect of all religions. For the three major monotheistic world religions, paradise awaits those who follow their god's will,[4] while damnation and eternal torment will eventually greet those who live counter to their god's desire.[5] Just what constitutes the will of god differs not only between religions, but also within them. Furthermore, certain religions, notably Christianity and Islam, allow those martyred for their faith to reach heaven automatically. Crusaders and suicide bombers regard themselves as martyrs for the faith, thus enuring themselves everlasting paradise (Rapoport 1988: 199). Nor is the wedding of terror to religion solely a Middle Eastern experience. Millennium cults of the West and the East have perpetrated their own strain of threat (Ranstorp 1996: 125).

This is not to suggest that religion is the cause of terrorism. Religion is merely one of the factors, neither necessary nor sufficient, that combines

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[3]In this case, they decided to destroy the 1000-year-old Buddha statues built by Buddhist Afghan ancestors. When faced with offers to purchase the statues, the Taliban spokesman reportedly said, "We prefer to be remembered as the destroyers of statues, rather than as the sellers of them" (Stirnimann 2002: 89).

[4]The three differ on specifics, however. The nature of life in paradise for Muslims is Mutahsibir (sensual pleasure in sex with virgins, eating, and happiness) in Janah (Sura 55: 46). For Jews, eternal life is enjoying the radiance of the divine presence in Gan'eden (Berakhot 17a). Finally, for Christians, fellowship, worship, service, and praise await the holiest in Heaven (Revelation 21).

[5]Again, with respect to punishment, the three differ slightly, although all three have a version of Hell. Islam has eight levels in their Hell (Sura 4: 56; 55: 46), Judaism has Ge'henna (or She'ol) where the damned burn in a fiery pit (Ezekiel 31:16), and Christianity has a lake of fire (Revelation 20: 14).

to create the terrorist. The discussion above merely demonstrates that the ability to commit a terrorist act exists in us all. The conflict between Thanatos and Eros, between the death instinct and the drive for immortality, are present in us all. Sederberg (1989) points out that the terrorist is often no different than the "guy next door". So what makes the terrorist take the fatal step? Is it pathology? Is it a result of social ills? Or is it merely normal psychology? Let us look at each of these three reasons in turn.

3.1.1 Pathology

The common American view of terrorists is that they are 'suicidal' or amoral psychopaths (McCauley 2002: 5). One can even point to the Realist School in International Relations literature as assuming the default action of humans is towards violence.[6] Except for the rare terrorist, pathology is not a factor; that is, terrorism is neither a mental disease nor the result of a mental disease (Ruby 2002: 15; Weatherston and Moran 2003: 698). As explained above, the seeds for terrorism are within each of us. The plentiful examples of soldiers and policemen willfully killing noncombatants and of large organizations carrying out heavily planned attacks, demonstrates that the typical terrorist is not a Theodore Kaczynski holed up in his backwoods cabin spouting manifestoes to the world. The typical terrorist is the typical person (McCauley 2002: 6). In fact, the myth of the pathological terrorist substantially hinders counter-terrorist solutions.

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[6]This is especially apparent in Hobbes's (1998 [1651]) *Leviathan,* where man in the state of nature is most assuredly violent.

When the terrorist is automatically seen as deranged, there is no thought of a political solution to the underlying causes. Force is usually the first, and quite often the only, method used against terrorists (Sederberg 1989: 79).[7]

If there is a common subnormal aspect to terrorists, it may be found in the type of terrorism used. Cruelty has definite causes. For Sederberg, there are five causes of cruelty: absence of love and approval, need for obedience, distance from victims, victimization as a child, and fear (Sederberg 1989). Of these, two are most pertinent in the discussion of the causes of terrorism: distance from the victim and fear. Those subjected to terrorist actions are the "others", who are automatically different, automatically inferior, and, thus, socially removed from "us" (Stirnimann 2002: 97). Fear is the stimulus for the fight-flight response, and fear of religious loss is doubly so (Crittenden 1999: 148; Franck 1997: 626).

3.1.2 Emotional Expression

Terrorism can also stem from a need to express an emotion, usually hatred or anger, but often merely frustration. Many newspaper headlines after the September 11, 2001 terrorist attacks asked, "Why do they hate us?" President Bush's response was, "They don't know us" (McCauley 2002: 7). Is it that simple, or is there another reason behind the anger? Frank (1988: 2) argues that anger is an emotional tool that allows the weak to keep

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[7]The Madrid Agenda may be the first step in the direction of changing this tendency. The March 11, 2005 international meeting concluded with recommendations that states deal with certain underlying risk factors, including poverty, social inequalities, and strengthening democratic institutions.

the strong in check. Aristotle held that anger was the reaction to insult. Behavioral scientists hold that anger is a reaction to pain, frustration, and despair (McCauley 2002; Umberson, Williams, and Anderson 2002). Thus, the extant literature ties anger into violence and terrorism.

However, even though anger and violence are intimately entwined, angry people do not always resort to violence. They express themselves in different ways depending on their resources and experiences. Persons with violent experiences are more apt to use violence (Schieman 2000; Throits 1990; Umberson, Williams, and Anderson 2002).[8]

3.1.3 Normal Psychology

Finally, terrorism also stems from normal psychology; that is, terrorists kill for the same reasons that people have killed throughout time: causes, family, friends, love, etc. Causes are especially prone to creating violence, as humans must believe in something more important than life, something that transcends finite life. According to McCauley (2002: 12), we must believe, for we are sentient and know that we will die. Causes for which we are willing to fight soon become causes for which we are willing to die and kill. That is not to say that all people with a cause resort to terrorism. There is an aspect of the slippery slope here. Rarely does a terrorist wake up one morning and decide to commit an act of terror. The process is usually a series of gradual steps, none of which seem fateful, but each caused by the failure of the previous. Milgram's infamous electro-shock experiment

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[8]This also suggests a mechanism by which violence begets violence.

demonstrates the effects of gradualism. Twenty percent of those who were allowed a free hand in slightly increasing the voltage of the shock eventually delivered the maximum amount. They did so because there was no sudden jump between a safe shock and a dangerous one (McCauley 2002: 15). The same gradualism can be seen in the Basque terrorist group, *Euskadi Ta Askatasuna* (ETA). Originally, the ETA, composed of members of the Basque nationalist party, espoused democratic ideals and protection of the Basque language and culture. They gradually shifted to using violence to achieve their results. Those simple violent measures became assassinations by 1968. Finally, they moved on to terror, including car bombings shootings, and arson (Shafritz, Gibbons, Jr., and Scott 1991: 119). Each individual step is not that great, but the complete journey is disasterous. More than 750 people have died at the hands of the ETA ("ETA: Basque Homeland and Freedom" 2004).

3.1.4 Despair

A man with nothing also has nothing to live for. Perhaps the person driven to terrorism sees no other opportunity available to him. Non-violent outlets do not exist. Despair reigns. Lack of opportunity comes from two sources: economic and political. Modernization and globalization both increase the economic levels of states and their citizens. If this is true, then why are the most modern states the ones that experience terrorism the most (Crenshaw 1981)? While the effects of modernization and globalization will be explained later, one relevant aspect surfaces here — change. In societies hit with modernization and globalization, that society is changing

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rapidly. While economic advancement results, it may not result evenly. In fact, it may further exacerbate the rich-poor divide in the country or in the world (Malone and Thakur 2003). High unemployment rates may result when a traditional-agricultural society is transformed into a modern-industrial one (Samara 2000: 20). Those who cannot adapt quickly are left behind. When employment is ethnic-based, modernization can also exacerbate ethnic tensions (Harrison 1983; Medrano 1984).

One can also lack opportunity in the political realm. This lack of opportunity ostensibly increases the rates of despair and of violence. However, data does not support this argument at first sight; the United States, arguably the most democratic of states, has the highest level of terrorism (Crenshaw 1981). Furthermore, some political parties in Western Europe are merely political wings of terrorist groups (Weinberg 1991). Why do these things seem so counter-intuitive? Why do people living in states which allow them political expression still resort to violent extra-political means? First, other factors may be responsible for the high levels of terrorism in the United States. When we control for those factors, level of democracy may become either statistically insignificant or significant as a retardant. Also, when examining states transitioning to democracy, while violent crime does rise dramatically, it appears to be a product of disruptions in traditional patronage. In other words, significantly altering the political system significantly changed the rules; those who were enfranchised under the *ancien régime* became disenfranchised under the *nouveau* (Villarreal 2002).

3.1.5   Adolescents and Adolescence

The youth, especially the males, are especially prone to violence (al-Hasan 1986; Hagan and Foster 2001).[9] This is true for a variety of reasons. Adolescent males are not fully developed, physically, emotionally, or sexually. Evolutionary pressures encourage adolescent males to be more violent (Kanazawa and Still 2000: 444). Adolescent males are also expected to be adult males in their behavior and duties. As such, they are under higher levels of stress, and since they lack experience dealing with stress, they tend to deal with it through violent means (van Gundy 2002). They are outside the political process, being unable to vote, so they experience despair in that realm. Finally, they are also most prone to being unemployed for a variety of reasons, including lack of work history and low skill levels (Caspi, et al. 1998). Because of these reasons, they are much more prone to stress and to despair than are others. Thus, they are much more prone to violence. If the adolescent male is part of an out group, then the probability for violent actions is even higher (King 1997; Wiltfang and Scarbecz 1990). This is especially true in those traditional cultures that impose such pressures on the male. However, females are not immune to the siren song of terrorism. Females lead terrorist organizations, are members of terrorist organizations, and are suicide bombers (Pape 2005). Thus, adolescence should be a greater predictor of terrorism risk than just male adolescence.

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[9]This observation does not rule out the existence of female terrorists. To say that female terrorists do not exist is to ignore the historical record. While it is rare for women to actually lead terrorist organizations, they are used extensively in combat. Approximately a fifth of the combatants in Peru's Maoist *Sendero Luminoso* were female. However, the majority of terrorists (and terrorist leaders) are male (Foreign Policy Association 2005).

3.1.6 Summary

As far as the individual level of analysis, we know that a terrorist is a normal person. Freud and Jung both point out that the death instinct is a part of every person. There is a conflict within us all between love (Eros) and death (Thanatos). The survival instinct quite often fights with the death instinct. As a result, we seek both love and death in life.

The quest for immortality, only achievable in proxy, compels man to create both offspring and works survivable through history. Some in the past have committed deeds of infamy to last the generations, deeds whose apparent purpose was to garner historical attention. Herostratus's attempt at immortality through the destruction of the Temple of Artemis, one of the Seven Wonders of the Ancient World, was almost thwarted by the Greeks who sought to expunge his name from all records. They failed, and Herostratus's name survives to this day solely through his malicious act. A second source of immortality is religion, for it offers paradise for those who follow the will of their god. Many have pointed to religion as the cause of terrorism, however it is not religion, per se, that serves as the impetus; it is the quest for immortality. Religion serves as a possible vehicle for legitimization or justification for the terrorist actions.

Finally, looking at why normal people take that fatal step into terrorism, we are left with the same answers for a related question: What is to live for? Those things that make life worthwhile for us, those things most important to us, those things for which we are willing to die are also those things for which we are willing to kill.

In the final analysis, at least at the individual level, the research suggests that the terrorist is no different from the rest of us. In fact, it suggests that the ability to commit such acts exists in us all, only waiting for the right circumstances to give birth. What might those circumstances be? Despair. Any circumstance that instills a sense of despair, of hopelessness, or of major stress begets despair. It is this despair that pushes people towards violent acts.

3.2 Group Level

If the research on the causes of terrorism in individuals provides us with little discernment, it is because we are all capable of resorting to terrorism under certain circumstances. The literature on group-level causes is more specific. Terrorist groups do seem to exhibit a common pattern in their birth. There are two aspects that this section addresses: funding, because terrorism is cheap — not free; and preconditions, as most of the political science literature focuses on the preconditions of terrorism.

3.2.1 Funding

Terrorism is relatively inexpensive to commit, at least in terms of resources. A van, some fertilizer and kerosene, and maybe some specific knowledge that can be found on the Internet,[10] are all that is needed to transform

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[10]The Animal Liberation Front helpfully provides an online guide on how to commit certain acts of terror: "The A.L.F. Primer: A Guide to Direct Action and the Animal Liberation Front, 2nd ed."

a willing body into an able one. Sometimes, all it requires is a gun (and ammunition) and the will to use it against others. However, money does help, and terrorist groups that are able to raise funds are also able to continue their existence and to attack better-protected targets (Corsi 1981: 64). This need for resources is not as great as that of the guerillas during a civil war. For a terrorist, money merely allows them to perpetrate more costly acts more often. As such, a bankrupt terrorist organization will not necessarily cease to exist. Diasporas and irredentas do aid terrorist organizations, but they are not a necessary condition for this reason.

Since the September 11, 2001 terrorist attack, financial sources for terrorism have come under intense scrutiny. There are three primary sources: the state, private-illicit sources, and private-legal sources. State funding of terrorism has dropped off in recent years for two reasons. First, the Soviet Union, a heavy financer of terrorism, ceased to exist (O'Brien 1996). Second, other states who supported terrorism are trying to join the community of states (Bantekas 2003). These two factors have greatly reduced the amount of money flowing to terror groups from states.

Private financing by illegal means is a second source of terror funding, with a primary source being drug traffic (Bantekas 2003; Kay 1999; Miron and Zwiebel 1995). While opium from Afghanistan and cocaine from Columbia are the main sources of drugs, drug money comes primarily from the United States and Europe (Bantekas 2003). This drug money funds terrorism. Narco-terrorism is not new. The United States has been heavily involved in the war against the Colombian drug lords since the early George H. W. Bush administration (Crandall 2001: 100).

A new source of terror funds are charities. In the aftermath of the Cold War, long-subsumed ethnic tensions percolated to the surface once again. These ethnic and religious groups often formed charities, collecting moneys from sympathetic people and giving some of it to terrorist groups.[11] Bantekas (2003) related how some charities operated. "Under the guise of a 'charitable' or 'relief' organization, a terrorist group would openly (to the particular audience addressed) solicit funding for operations, taking advantage of the benefits inherent in the legislation on charities" (Bantekas 2003: 322). While the charity phenomenon expanded greatly after the Cold War, it is hardly new. The Irish have used such tactics for more than a century, collecting money from the émigré Irish and sending it back to Ireland to fund the struggle against their British overlords (Rapoport 2002).

3.2.2 Group Preconditions

While funding is not a necessary component according to the literature, there seem to be some conditions that must be in place for a group to choose the path of terror. First, there must be a unified group. This group can be united based on ideology or on culture. Examples of ideological groups that have used terror in the past include anarchists (e.g. Narodnaya

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[11]Many of the major world religions either encourage or require giving alms. The Baha'i, the Buddhist, and the Hindu encourage charitable giving, but do not specify the amount (Phillips 2004). The *tithe* is the Judeo-Christian form, a mandatory 10% donation to the poor (Leviticus 27:30; Malachi 3:8-10). The *zakât* is the Islamic form, a mandatory tax on excess wealth (usually 2.5%). The Qur'an designates those who can receive the zakât: *fakir, miskin, amil, muallaf, riqab, gharmin, ibnus sabil,* and *fisabillillah.* The *fisabillillah* (also known as *sabil Allah*) are those who fight for Allah (Bantekas 2003; Qur'an Sura Al-Muzzammil:20; Qur'an Sura Al-Tauba: 60).

Volya and the Second of June Movement), environmentalists (e.g. the Animal Liberation Front and Earth First), and political (e.g. the Red Army Faction and the November 17th Revolutionary Organization). However, examples of terrorist groups based on culture are more numerous: the Basques, the Ulster Catholics, the Corsicans, and the Jurassiens are a few European examples. What do all of these groups have in common? They identify themselves as being different from others. That is the basic requirement of a group, an 'us vs. them' dichotomy (Stirnimann 2003: 97).[12]

Taking nationalism as an illustrative example, what creates nationalist feelings? First of all, to have some sort of 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 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" (Mellor 1989: 4). 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

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[12]The us–them dichotomy was quite explicit in the days following the September 11, 2001 attacks on the United States. President Bush, Prime Minister Blair and Osama bin Laden all defined the conflict, both past and present, in pairs of social, political, moral, and religious dichotomies (Leudar, Marsland, and Nekvapil 2004).

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sense of solidarity" (Smith 1988: 9).[13] Thus, nationalism requires a sense of separateness from the larger group.

Next, what increases the strength of this us-them dichotomy? Two things: history and repression. For history, the longer a group is together, the more they see themselves as being together. For nationalism, as mentioned in above, history is extremely important. Crenshaw (1981) holds that members of a nation have a common historical tradition. Smith (1988) and many others (Calhoun 1993; Feeney 2002; Triandafyllidou 1998) concur in that groups without a common history (real or perceived) cannot consider themselves a group; that is, a sense of history is a necessary condition.

The second factor that increases the strength of the us–them dichotomy is repression. There must be some form of repression involved, either real or perceived. Terrorists need a cause; they need something to drive their actions. Just being different is not sufficient to compel a people to commit acts of violence; there must be some sense of repression. This repression can be either political or economic. Crenshaw (1981: 383) points out that political disadvantages both increase the divide between the group and the state and increase the sense of grievance against the state. In fact, she places political repression as the first cause in her list, even though

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[13]Smith's position also avoids the primordialism debate. For Smith, it does not really matter if the nation is fundamental, only that the people believe it to be. The Irish nation is a prime example of a created (or re-created) sense of nationhood. It was not until the Irish renaissance of the mid-nineteenth century that Irish was considered a nation with its own distinct history and culture separate from that of Great Britain. As a result, the creators of the Irish nation could be considered Thomas Davis, Charles Gavin Duffy, and John Blake, the founders of the Young Ireland movement (Feeney 2002: 20).

she later admits that such a grievance is neither necessary nor sufficient.[14] More recently, Murshed (2002) found that certain types of grievances can result in civil wars. What kinds of grievances are more likely to lead to civil wars?

> [Those] which are related to economic factors: systematic economic discrimination against groups based on ethnolinguistic or religious differences. Extreme poverty and poor social conditions (including refugee camps) also facilitate conflict by providing more readily available combatants. (Murshed 2002: 389)

Just as political repression both increases the definition of the group and provides a concrete grievance against the state, financial differences do as well. Medrano (1995) lays out two complementing and alternative theories to determine the effect of concentration on ethnic violence. The first, Ethnic Competition Theory asserts that ethnic conflict comes from groups competing for the state's resources (Medrano 1995). With a limited amount of resources available, the competition breaks out along ethnic lines if those ethnic lines are apparent. One result of this is that conflict between ethnic groups should occur more frequently when the groups interact than when they are separate (Bélanger and Pinard 1991; Tilly 1991).

Ethnic competition may also result from occupational desegregation, as the ethnic groups would then be competing for the same employment positions. When one ethnic group has a prominent history of employment in a

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[14]She does, however, suggest that the perception within the group of such a grievance is a necessary condition (Crenshaw 1981: 383).

certain economic sector, it becomes a part of that ethnic group's identity. When that economic sector experiences desegregation, the original groups will tend to see the entrants as trespassers and as threats to the group's economic identity and vitality. This happened in the United States when European immigrants were displaced in their traditional economic niche by the internally immigrating African Americans. One result of this economic displacement was increased ethnic violence against the African Americans by those who would not accept their incursion. (Olzak 1992)

Ethnic Segregation Theory asserts the opposite — ethnic conflict comes from one group segregating itself from the others (Medrano 1995). This segregation can be physical (movement to ghettoes) or economic (one eth-nonation inhabiting only one employment sector). Economic segregation, in itself, does not increase the probability that a group will resort to violence. It does, however, increase the sense of separateness felt by the group. This happens because the group begins to see that employment sector as a part of the group's identity. Such ethnic segregation based on economic sectors happened dramatically in Germany after 1950, when the German state began signing contracts with other states to import labor to drive the German economy (Friedrichs 1998).

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. However, as we will

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later see, an economically privileged group does have a lower probability of resorting to violence, unless that advantage is threatened.[15]

Furthermore, money is a great motivator for action. Seeing hard-earned money go to feed 'different' people has the ability to foster a sense of resentment. Similarly, seeing one's children go hungry while a separate nationality living nearby succeeds can create the same sense of injustice. The feelings increase in intensity in the presence of relative deprivation (Gurr 1970). In either case, economic disparities are causing a radicalization within the population. Malone and Thakur (2003) state,

> 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.

In his influential work, Gurr combines economic and political repression in a general explanation of why certain groups rebel against the authority of the central government. For Gurr, the basic reason is relative depravation; i.e., the gap between value capabilities and value expectations. For Gurr,

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[15] A similar result is found in international conflict literature. When one country has their capability advantage threatened by a relative neighbor, the probability of them initiating conflict with the challenger increases, especially when that challenger is different in some fundamental manner. Thus, there was no conflict between the United States and Great Britain when the former overtook the latter, but there was when Germany was overtaking France (Houweling and Siccama 1988: 94; Kim and Morrow 1992: 918).

gap growth is fundamental. As long as groups do not have expectations too far above what they receive, there is no great impetus to rebel. However, when the group sees the gap between reality and expectations grow greater, they resolve into action (Gurr 1970).

However, there are conflicting findings in the terrorism literature. Terrorists do tend to be middle-class individuals who are neither poorly educated nor poor. Yet, those states in which terrorism thrives contain large numbers of both the poorly educated and the poor (Blomberg, Hess, and Weerapana 2004; Bueno de Mesquita 2005a; Krueger and Maleckova 2002; Russell and Miller 1977). How can we reconcile these differences?

3.2.3 Summary

And so, at the group level, we have that money is not of primary importance as a predictor — conditions are far more important. In terms of resource constraints, it is true that terrorism is inexpensive to execute. However, in terms of reaction, terrorism has some rather severe associated costs. Among these possible costs is loss of life, loss of legitimacy, and loss of support. One class of theorists holds that terrorist groups are rational actors who, in effect, perform cost-benefit analyses to determine the advisability of their actions (Ross 1993: 317; Sederberg 1989: 97–101). Thus, terrorists weigh these costs, both actual and probable, to determine whether their actions are beneficial to them in achieving their goals. According to the literature, what factors do they weigh?

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First, the terrorist group must have a raison d'être, some purpose for existing as a group. Ideology, culture, history, and repression all combine, either singly or in larger combinations, to create distinct groups. The repression, economic or political, also serves as the impetus for action. Altering the current order serves as the benefit from action. However, the action also has associated costs. These costs come in the form of increased repression by the state and of loss of support from the people.

The terrorists must ensure that they do not make the situation too much worse. In Uruguay, at that time a liberal democracy, the *Tupamaros* (1960s) sought concessions from the government. When they did not receive them, they began a campaign of terror to bring about their requested concessions. As a direct result of this campaign, the people rebelled against them, the government fell in a military coup d'état, and the military dictatorship effectively and efficiently eliminated the group (Gibbs 1989).

Next, the terrorists need to ensure that the public backlash against their actions is minor or non-existent — they must win the long-term battle for the hearts and minds of their people. Actually, they only have to perceive this to be true. One of the effects of terrorist activities is that "their acts antagonize previously neutral and disinterested groups and alienate many of the people on behalf of whom they claim to act" (Ross and Gurr 1989: 409). Sources of this backlash include government propaganda campaigns, natural public aversion to unrest, lack of effective propaganda by the terrorist organization, and an unwillingness of the public to bear the costs of the terror campaign (Ross and Gurr 1989).

Thus, it seems as though the group is more important than the individual level of analysis. Not all groups are disadvantaged either economically or politically. Not all groups have concrete grievances against the state. Thus, not all groups experience an increased probability of resorting to terrorism. Later, I will address how this information can be used to keep groups from resorting to terrorism, and how it can be used to stop terrorist groups currently existing. However, the group must be placed in a larger system. Just as there are certain characteristics of the groups that encourage terror, the same is true about certain characteristics of the state.

3.3   State Level

Characteristics of the state have also been found to be important in determining the propensity for terrorist actions (Crenshaw 1981, 1998; Mousseau 2001; Ross 1993). These characteristics fall into two broad categories: regime type and state milieu. Regime type refers to the level of democracy and autocracy within the state, including how able the regime is to repress terrorism once it begins. State milieu refers to the demographic and geographic factors that affect life within the state.

3.3.1   Regime Type

There are conflicting findings on how regime type affects terrorism. The theory seems to be as follows. Autocratic regimes are more repressive than democratic regimes. Thus, groups have a greater chance of being repressed,

either politically or economically, in an autocratic regime (Crenshaw 1981; Gurr 1970). As a result, autocratic regimes should spawn more terrorist groups; they provide their citizens more reasons to come together against the government, yet they make available fewer peaceful outlets for them. Democratic regimes allow for a greater number of ways for the groups to peacefully express their dissatisfaction with the status quo, and they have mechanisms that allow for peaceful change (Huntington 1991: 172). Thus, democracies should have fewer terrorist organizations.

However, autocracies, being more repressive, are better able to control and stop terrorists from reaching a critical number than are democracies (Hamilton and Hamilton 1983). These autocracies reduce the number of "closed curtains" and reduce the size of the "active operating space" of the dissident groups (Galam 2003: 141, 143). Structured autocracies are also better able to turn the entire apparatus of the state against terror groups without compromising principles. Democracies value personal liberty over state control. Because of this, they are less able to stop terrorist groups from continuing their existence (Crenshaw 1981). So, should democracies have a higher rate or should autocracies? Current theory unequivocally asserts, yes.

A quick cross tabulation shows that for all minorities at risk in the world, democracies have a higher incidence of terrorism in comparison to the number of minority groups than either of the other two types of regimes (see Table 3.1). Furthermore, this difference is statistically significant (χ^2 = 37.41; p $\leq$ 0.001). This finding is in accord with Crenshaw's (1981)

Table 3.1: Cross tabulation of regime type vs. incidence of terrorism in Western Europe, 1945-2000.

	democracy	mid-realm	autocracy	total
terrorism that year	78	26	23	127
	(4.5)	(1.5)	(1.7)	
no terrorism that year	1656	1720	1343	4719
	(95.5)	(98.5)	(98.3)	
total state-years	1734	1746	1366	4846

Notes: Numbers in parentheses represent column percents. Democracies are significantly more prone to outbreaks of terrorism than the other two types of regimes ($\chi^2 = 37.41$; dF $= 2$; p ≤ 0.001). The regime type data is from Polity IV (v2002), whereas the terrorism data is from Minorities at Risk (v1.03). Regimes are democracies if they score +6 or higher on the POLITY2 variable; autocracies, -6 or lower; and mid-realm, between -5 and 5, inclusive.

assertion that the permissive structure of a democracy is a necessary condition for terrorism (Ross 1993; Weinberg 1991). This permissive structure allows like-minded individuals to come together to form (perhaps violent) groups. It allows individuals to pass freely through the territory without being automatically subject to police search. It also allows groups to form on democratic soil, perhaps to carry out attacks on a neighboring state as happened with the exiled Spanish Basques leaders in southern France (Kurlansky 1999).

Finally, according to current theory, there must be a precipitating event before a group makes that fateful step to terrorism (Crenshaw 1981; Ross 1993). Crenshaw found that this precipitating event quite often was the government using unexpected and unusual force to respond to a protest. According to Crenshaw (1981), this unexpected event demonstrates to the

group that the state is no longer adhering to the social contract and that a boundary line had been crossed in the battle.[16] The event may also demonstrate that the government is not really as democratic as it purports to be, thus giving weight to the demands of the group (Bonanate 1979: 197). This event may also show a fundamental weakness in the government, thus giving the group more esteem in the battle or giving other opponents of the government an impetus to attempt a coup (Gibbs 1989).

3.3.2 State Milieu

What about demographic and geographic factors? How do they affect the probability of terrorism within the state? There seem to be several demographic variables that contribute to the use of terrorism. Level of urbanization, level of modernization, the pervasiveness of the mass media, and simple demographics all contribute.

Urbanization. That the level of urbanization is a factor in terrorism is not in question (Crenshaw 1981; Wilkinson 1977). Cities offer two things that terrorists need: a recruitment base and targets. Large urban centers tend to contain the poor, the downtrodden, and the frustrated (Ehrlich and Liu 2002: 183). These groups of people are prime candidates for recruitment because they already feel the relative deprivation, the economic inequality, and the despair. From buildings to people, urban centers also offer a multitude of targets that the terrorist organizations use (Grabosky 1979: 76). Urban centers also offer density and anonymity. Density allows

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[16]For an extensive discussion on the effects of boundary violations, see Schelling 1960.

for geometrical and spatial aggregation of both terror-prone persons and their silent, passive supporters (Funes 1998; Galam 2003). Anonymity allows individuals to move about and plan with relative impunity. That urban centers are also centers of conscious anonymity is well-documented (Sampson 1991: 57, 58). Urban settings also allow juxtaposition of great wealth and great poverty, thus exacerbating the feelings of deprivation and despair (Conley 1999; Peterson 1991).[17]

Modernization. Terrorism is hardly a new phenomenon.[18] Thus, modernization is not a necessary cause of terrorism. However, it appears to be an accelerant. Modernity offers a plethora of targets, weapons, and mass media outlets that terrorists use to their advantage (Johnson 1982). Modern targets include nuclear power plants. Modern weapons include airplanes, car bombs, and RPGs. Modern media outlets include television and the Internet (the media is explored in greater depth below). Furthermore, greater communication, greater mobility, and greater openness, all things associated with modernity, associate themselves with higher risks of terrorism (Crenshaw 1981).

The Mass Media. One requirement for terrorism to work is that the people need to be terrorized. To accomplish this, the act must be capable of inducing terror and the knowledge of that act must get to the people. The

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[17]In a separate study, Tittle and Stafford (1992) found that, when taking demographic variables into consideration, urban residents scored higher than either suburban or rural residents on indices of anonymity, alienation, and deviance.

[18]The Zealots (Secarii) was a terrorist group in Palestine around the beginning of the first millennium. The rulers immediately after the French Revolution of 1789 called themselves terrorists, while history calls the time of their rule the Reign of Terror. The Narodnaya Volya was a Russian anarchist group at the turn of the twentieth century.

first part is the responsibility of the terrorists; the second is the responsibility of the media. Without advertising the act, terror is quite difficult to spread. Thus, the media is, at best, a partial cause of the effectiveness of terrorism (Bassiouni 1981; Schmid and De Graaf 1982). This is known to the rulers of the countries hit by terror events. Margaret Thatcher, Prime Minister of Great Britain, mentioned the effects of the media on the effectiveness of terrorism (Shafritz, Gibbons, and Scott 1991: 257). This is also well known to terrorism researchers (Crenshaw 1981; Johnson 1982; Ross 1993). Some researchers have even posited that a solution to the problem of terrorism is to either reduce the freedom of the media (Slone 2000) or to encourage the media to police itself through stricter ethics (Held 1997). However, both of these solutions, with the first being most blatant, show a willingness of some states to reduce the freedom of their citizens in order to reduce the effects of terrorism.

Demography. With the above arguments about the individual level of analysis, we already know how certain individual factors affect the likelihood of a person resorting to the use of terrorism. The poor, the unemployed, the adolescent all have higher probabilities of using violence. Therefore, it is reasonable to conclude that areas with higher concentrations of poverty, unemployment, and adolescents would have higher chances of breeding terrorism. This conclusion is in line with current theory, as well (Ehrlich and Liu 2002: 183).

One thing not yet explored is the effect of the number of other outgroups on group terror propensity. There are two lines of thought. The first holds that the chance of a state experiencing a terror strike increases

when there are more terror-prone groups. This is due to the mathematics of the situation. Mathematics affects the outcomes in two different manners, however. First, a greater number of groups in existence reduces the chance that any one of them will be able to get their problem addressed through pluralist political means. In other words, there is a limited amount of resources — time, power, and money — and a greater number of groups vying for the pie will necessarily reduce the average amount any group will attain. This, along with the 'otherness' of the other group, increases the probability of intergroup conflict and violence (Kramer 1994; Krippendorff 1979; Galinski 2002). Second, a greater number of groups necessarily increases the number of conflict nexuses between the groups, as the number of possible interactions increases (Dion 1997).

However, does increasing the number of out-groups always increase the likelihood of a state experiencing terrorism? Or, is there a certain level beyond which increasing the number of out groups actually decreases this probability? Is there a point where there are so many out groups that adding an additional has no effect on terror likelihood? In fact, could adding yet another out-group actually create a fraternity of "out-groupness", where the groups begin to work together to achieve their ends within the political system, and thus reducing the probability of a terror strike in the state?[19] Interestingly enough, according to research, there is a point beyond which increasing numbers of out-groups actually reduces the level of ethnic violence experienced under certain political conditions, namely

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[19]Or, could this fraternity work together to achieve the goals using violent methods? The fact that there is a general increase in pacifism beyond a threshold number of out-groups suggests that groups who do work together do so using political means at a greater rate than those who use violent means.

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the state's level of democracy and economic development (Mousseau 2001; Rummel 1997).

3.3.3 Summary

So, what do we really know about which state factors affect the likelihood of experiencing terrorism? Autocracies have a greater chance of causing terrorism to flourish but also have a better chance of keeping it under control. While democracies tend not to spawn their own terrorist groups, they do have a greater problem with controlling terrorism once it begins. Furthermore, the openness of the liberal democratic state allows non-native terrorist groups to organize within their territory.

A free press is positively correlated to terrorism for one fundamental reason: the press advertises the terror event to the population. This is one of the necessary components of successful terrorism. True, there are other means of transmitting the terror, but the free press does it with ease.

Beyond regime characteristics, we know that several demographic variables are positively correlated with terrorism; among them are poverty and inequality. This finding should not be surprising, as these two correlates are also indicators of what causes groups to resort to terror, and of what causes individuals to resort to terror. We also know that levels of modernization and of urbanization are positively correlated with terrorism.

These latter findings seem to conflict with a body of research in the literature holding that the well-educated, middle-class members of society tend to be the terrorists. Neither body of research is incorrect. This latter

research either refers to the leaders of the terrorist movements (Hudson 1999) or to specific terrorist groups (Krueger and Maleckova 2003). Those driving and directing the movements do tend to be wealthier and better educated than the foot soldiers of the movement. However, the leaders must be able to find those members of society willing to risk death in the name of "the cause." Those willing often fit the former description proffered above. However, let it be said that these are not empirical rules. Exceptions exist. Thus, while relative deprivation may be a force for terrorism in some sectors of the world, the rich and the middle class compose majorities in others (Hudson 1999).

3.4 System Level

Beyond the individual, group, and state levels, there are certain factors at the system level that influence terrorism. There are four major forces in the world that affect terrorism. These are the new world order, the growing North-South economic divide, globalization, and other terrorist events.

3.4.1 The New World Order

The phrase 'new world order' is neither new nor well-defined. New world orders were created in 1776 (American Revolution), 1789 (French Revolution), 1918 (Treaty of Versailles), 1941 (Neuropa, the Nazi vision of the new Europe), 1945 (World Socialism à la the Soviet Union), and so forth. Every time there is a revolution or a major change in the world, the results

are usually termed a new world order. The new world order of most relevance to this current discussion is the one caused by the fall of the Berlin Wall — the end of the Cold War. This new world order is characterized by two things: unipolarity on the world scene and a new faith placed in international organizations like the United Nations.

The Fall of the Soviet Union and the Rise of the Unipolar World. Research on the effects of the end of the Cold War on terrorism is not plentiful. Two related factors come into play here. The first is the direct effects of the Soviet Union on world-wide terrorism. The second is the effect of polarity on terrorism. Conspiracy theorists in the West during the Cold War often placed the blame for outbreaks of terrorism at the feet of the Soviet Union. However, testing that hypothesis directly required data from the Soviet Union that it was obviously unwilling to share with researchers in the West. However, it could be tested indirectly.

Indirect tests, usually searching for linkages between Super Power diplomatic crises during the Cold War and terror events, have actually supported the hypothesis (O'Brien 1996). Furthermore, the decline in terrorist activities immediately after the end of the Cold War also supported the contention that the Soviet Union was involved in funding terrorists, the current increase in terror activity not withstanding (Enders and Sandler 1999).

The United Nations. One of the original purposes of the United Nations was to bring the countries of the world together so that communication and cooperation could flourish. While the UN record on both of these hoped-for results has been spotty throughout its history, the constituent states

have been able to cooperate on terrorism only after the September 11, 2001 terrorist attacks (Ward 2003). What is the reason for this newfound push for cooperation?

> Prior to 11 September 2001, international instruments targeting specific criminal acts were adopted to deal with terrorism, and Security Council counter-terrorism measures, which were not mandatory, went unheeded. Post 11 September, the council adopted Resolution 1373 (2001) under chapter VII of the charter, setting out certain mandatory measures to prevent and suppress international terrorism, including reporting to the Counter-Terrorism Committee (CTC) on actions taken to implement the resolution. (Ward 2003: 289)

In addition to the new mandatory regulations, support organizations were created and funds were made available to help the states meet the new regulations. Thus, it was a combination of mandatory regulations, institutional support, and available funds (Bantekas 2003; Rosand 2003).

3.4.2   North-South Divide

As mentioned earlier, at the state level, income disparities have the ability to produce terrorists. The same appears to be true at the system level. The poor countries are beginning to feel isolated, frustrated, and 'relatively deprived', to use Gurr's term. The 'North-South' divide increases the chance that the individuals in these states resort to terror in order to create a more

equitable system (Ehrlich and Liu 2002; Malone and Thakur 2003). The developed North is beginning to recognize this problem, although steps taken so far to remedy the situation may be more aggravating to the problem than helpful (Rogers 1997). In fact, there is some evidence that there is a second factor currently at work. Because the North-South divide has existed for so long, the South has an image of the North as economic enemy. In other words, both the divide and the image must be eliminated before the divide can be abolished (Herrmann and Fischerkeller 1995).

3.4.3 Globalization

"Globalisation is a political phenomenon characterised by the weakening of mediating institutions and the direct confrontation between individuals and global forces" (Guéhenno 1998: 5). It is characterized by the increase in interactions between sub-governmental units between countries. Two aspects are important for this study of terrorism: the movement of money and the movement of images.

International Banking System. As stated earlier, terrorism is inexpensive. Bombs cost little when compared to their effects. However, money allows organizations to thrive and commit more grandiose schemes. For nationalistic terror organizations, this funding often comes from expatriates. Much of the IRA funding came from the Irish in America (Briand 2002). One of the main foci of the USA PATRIOT Act was to curtail funding of international terrorist organizations. Furthermore, in the aftermath of the September 11, 2001 attack, the UN passed several resolutions making it

more difficult for terrorist organizations to move their funds through the international banking system (Rosand 2003). The ease in which funds flow between countries is also a correlate of terrorism (Arquilla, Ronfeldt, and Zanini 1999; Bantekas 2003).

International News Media. The news media is no longer necessarily a local entity. Nor is it solely a state entity. The news media is now an international entity. The free international press allows people in one country to know about events in another. Thus, the reach of terror is greater (Arquilla, et al. 1999).

One of the difficulties ethnic groups have seeking independence is that they are much smaller and less powerful than their containing state. The international news media helps reduce this difference. If that group is able to be prominently featured in the press, they are better able to obtain international support to encourage their state to accede to their demands. Although this has yet to be tested universally, preliminary case studies support the conclusion (Burton 1985; Nash 1995).

3.4.4 Summary

The systemic level is the least studied of the four. This is mainly because it changes less often, and it is more difficult to consciously alter than the other levels. However, we do know some things about the factors at the systemic level. First, the period after the Cold War was marked with a decrease in terrorist activity, because the major state sponsor, the Soviet Union, no longer existed. Second, we do know that the growing wealth

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disparities between the states are causing a tension in the system that increases terrorist activity. International banking allows funds to move from donors to terror groups. Finally, the international media makes more powerful the activities of the terrorists for the exact reasons that state-level media does; it involves a greater audience in the actual acts of terror, thus increasing the probability that international pressure will be brought to bear on the containing state.

3.5   Chapter Summary

In this chapter, we examined all four levels of analysis with respect to the factors of general violence, political violence, ethnic violence, and terrorism. Inclusion of ethnic violence, political violence, and general violence was done to increase the amount of information available, for the theories on terrorism are fewer in number than those on ethnic, political, or general violence. It is also logical to assume that many of those factors influencing a group to resort to terrorism are the same as those just getting them to use violence. However, Ross (1993) makes an excellent point when he notes that there is no *a priori* reason to assume they are the same. There may be a fundamentally different mechanism at work in terrorism than in other forms of violence. After all, we already know that terrorism and guerilla war are fundamentally different because of the effects of land acquisition on tactics. Successful practitioners of guerilla wars have known that terrorism is anathema to their goals; it turns the people, one of your most important commodities, against you (Guevara 1998 [1961]; Zedong 1989 [1961]).

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Chapter 4

The Pressure Model of
Terrorism

> All science is either physics or
> stamp collecting.
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> Ernest Rutherford, as quoted in
> Birks (1962)

Ross (1993) asserts that there exist three basic categorizations of terrorism models: structural, psychological, and rational choice. Structural models focus on the configuration of group-, state-, and system-level forms and entities and how each affects the propensity of a terrorism outbreak (Crenshaw 1981; Ross 1993; Ward 2003; Weinberg 1991). Psychological models focus on the mindsets of the individual and what terrorist actions

require of the person (Gurr 1970; Ruby 2002; Stirnimann 2002; Weatherston 2003). Rational choice models assume people, groups, and states are single actors who act solely to maximize the utility of their outcomes (Bueno de Mesquita 2005b, 2005c; Post 2000; Schmid and Graaf 1982).[1]

Of these, the first is best developed in the political science terrorism literature, as it allows both for easier observation and for greater prescriptions. However, any attempt to model a higher level of analysis without using a lower level will necessarily lead to an incomplete theory. This is as true in the hard sciences as it is in the social sciences. With that said, however, partial theories do remain helpful. One can use and test and prescribe from the theory of evolution without fully understanding the biochemistry underlying it. Most subfields of chemistry make sense even in the absence of an intimate understanding of atomic and nuclear physics. However, chemistry is still better understood as a whole if the physical rules for atomic and subatomic motion are known and understood.

Current theories of terrorism either focus on a single level of analysis or append causes from two or more levels without providing a mechanism for such an appending. As such, the terrorism model I propose goes beyond a simple structural descriptive theory and places its foundation in the actions of people, thus providing the mechanics for coalescing the individual-level rules to higher-order aggregations. The Pressure Model of Terrorism does not necessarily overturn established observations and theories of terrorism,

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[1]There is a growing literature in which the interaction between the individual terrorist and the other levels is being more fully developed, primarily in a rational choice framework. Ethan Bueno de Mesquita (2005b, 2005c) appears to be serving as the vanguard of this movement, especially in using formal modeling techniques.

rather it shows how the four levels fit together and how the individual level affects and is affected by the other levels — it provides a framework for understanding how the current theories fit together. As such, it potentially allows for a greater level of prediction.

4.1 Structural Theories

As structural models are the best developed theories, it behooves us to examine them, for they share a common set of factor types and a common set of weaknesses. There is a tendency in the field to categorize the causes of terrorism into permissive causes and precipitant causes (Crenshaw 1981; Ross 1993).[2] Permissive causes (a.k.a. necessary causes) are those that allow terrorism to take place. Precipitant causes (a.k.a. trigger events) are those that provide the impetus for terrorism to occur. Permissive causes are steady-state or background conditions, while precipitants are sudden events. Ross (1993) supplies three permissive causes in his model: geographical location, type of political system, and level of modernization. Crenshaw (1981) emphasizes modernization, urbanization, social facilitation, society's condoning of terrorist actions, lack of political opportunity, elite dissatisfaction, passivity of the masses, and the government's inability or unwillingness to prevent terrorism as permissive causes of terrorism.[3]

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[2]Ernst Haas (1997) also uses this structure to explain outbreaks of nationalism.

[3]Two things missing from this discussion are poverty and education. Neither Crenshaw nor Ross suggests that either is linked to terrorism. This is in accord with empirical evidence from European left-wing terrorist groups (Russell and Miller 1977) and from Palestinian groups (Krueger and Maleckova 2003). However, as we will see, it is not necessarily the poverty level of the state that matters, it is the poverty level of the

The second category of causes, precipitant, is the sudden events that provide the impetus for a group to initiate the use of terrorism in their campaign. Ross (1993) presents seven categories of precipitant causes: social, cultural, and historical facilitation, organizational split and development, presence of other forms of unrest, support, counter-terrorist organization failure, availability of weapons and explosives, and grievances. Crenshaw (1981) concurs that grievances are the most important precipitant cause, but lists government use of unexpected extreme force as a close second.

Looking closely at the precipitant causes shows the first weakness of these structural theories — the precipitant causes are not necessarily point events. That is, they may also be considered steady-state conditions, especially if the original event did not immediately trigger an outbreak of terrorism. The Irish have received massive levels of support throughout the years, and this level of support did allow the IRA to have a terrorist campaign, but support was not a single event, it was a background condition (Briand 2002).

A second weakness of these structural theories is that the grievances may also be steady-state conditions. The loss of South Tyrol to Italy at the close of World War I did not result in a terrorist campaign at that time. South Tyrolean terrorism did not start until 1961, more than 40 years after the initial grievance of ethnic separation (Alcock 1970; Steininger 2003). Why did it not immediately result in a terror campaign? Why did the South Tyroleans wait until after separation from Austria, until after

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group *in relation to* the rest of the state. Furthermore, these two studies do not restrict themselves to ethnonational groups.

the world depression of the 1930s, until after the Fascists took power and denationalized them, and until after two failures of an Italian policy of autonomy for the South Tyrol before they began their terror campaign? Quite clearly, in this case, the initial grievance was not a trigger event, it was a background condition.

This is not to say that sudden events *cannot* lead to groups initiating terrorism. The ETA was relatively calm until Franco began the forced Castilianization of Spain, including the Basque homeland in the *Hegoalde* (Collins 1990; da Silva 1975; Laitin and Gomez 1992). It is to say, rather, that precipitant events may not be as precipitant as the structural modelers suggest. Additionally, much of the evidence suggesting the existence of precipitant causes is completely *ex post facto*; that is, only after looking back at the start of the terror campaign are we able to ascertain the specific precipitant event. Furthermore, little investigation is made of those precipitant events that did not — the dogs that did not bark. The forced Castilianization of Spain also affected the Catalans, the Galacians, and the Roma, yet none of these other ethnonational groups resorted to terrorism. Also, while France was experiencing general unrest during the 1970s, their Basques did not begin a terror campaign even though their brethren across the Pyrenees were deep in the midst of one.[4] This demonstrates a fundamental weakness in the current reliance on precipitant events to model terrorism — the unclear difference between precipitant events and non-precipitant events.

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[4]However, the French Basques did support the Spanish Basques by hiding their leadership and by providing a base of support (Council on Foreign Relations 2004).

The third weakness is that researching precipitant events requires a bit of selective analysis. The move of the Provisional Irish Republican Army (PIRA) to terrorism in 1970 illustrates this point well. The Troubles in Northern Ireland began when the Catholic civil rights marches were violently rebuffed by the entrenched Protestants — or did they? The Provisional IRA initiated its terror campaign in response to the Official IRA's failure to act in the face of increasingly violent attacks on Catholics in Derry, or did they? Was the precipitating event the Battle of the Bogside or the Burntollet Ambush? Was there even a single precipitating event, or did the terror campaign come about as a result of a steady, gradual, stepwise increase in violence? A read of the history of Ireland during this time period supports the contention that the Provisional IRA terror campaign was merely the next step in the escalating level of civil violence. (Coogan 2002; Feeney 2002)

Finally, even though Ross (1993) decries the absence of a theoretical structure for terrorism, he continues the trend by offering only a superficial model — one that provides surface-level observables without a single underlying theory to tie all of the hypothesized factors together. While he does offer a series of rationales for the factors he selects, he does not string them together in a coherent manner with a general explanation of why certain factors are more important than others. While not a weakness of the use of precipitant events in a theory, per se, it does underline the need to provide a framework from which the different factors can be gleaned *a priori*, rather than after the fact.

Clearly, a more general model needs to be created — one that reduces reliance on precipitant (or trigger) events as causes. The new model must base itself, first and foremost, on the individual, as the individual is the one committing the terror acts. The model I create below does just this.

At this point, certain presuppositions need to be explicitly stated. The proposed theory rests on a weak rational actor model — people act as though they are rationally acting to maximize their benefits. This does not necessarily mean that people consciously calculate the best action with perfect knowledge of all alternatives. It merely holds that they act *as though* they do. Part of the calculus for maximizing the outcome for any actor is cost-benefit analysis — one action is preferred to a second if the difference between the benefit and the cost for the first action is greater than for the second. This does not assume that all people place the same value on the same values; salience most assuredly varies from person to person and from time to time (Gurr 1970; Hechter 1986; Walt 1999).

4.2 The Pressure Model of Terrorism

The proposed model offers a mechanism for how factors in one level of analysis affect those in another. It also places the locus of action at the individual level. To use a physics analogy, the individuals are the particles and the rules under which they operate are the forces. Forces in physics depend on the particles, just as the movement of the particles depends on the forces involved. This physical science analogy can be clearly seen in both the agent-structure debate in International Relations (Carlesnaes

1992; Dessler 1989; Wendt 1987) and in constructivist theory, which asserts that people are a product of their environments just as they alter their environments — one cannot know about one without knowing about the other (Kivimaki 2001; Price 2004).

In physics, the particle is the actor — everything is defined in terms of the particle and what it can do. If I wish to continue this physics analogy for my model, my theory should be constructed in a similar vein. And that is what I do, starting with the individual actor — the particle.

4.2.1 Pressure

Psychology studies the individual (the particle) and attempts to uncover the rules under which the individual acts (the associated forces). In the psychology literature, the fundamental basis of action is the stimulus-response dyad (Freedheim 2003; Gardiner 1974). A neutral actor receives an external impetus and produces an associated response based on that stimulus. Different stimuli may produce different responses. Identical stimuli, under identical circumstances, produce identical responses for a given actor.[5] A single stimulus produces a biological imperative for action, a pressure to act. A greater number of coherent stimuli create a higher action pressure, while incoherent stimuli do not *necessarily* combine to increase the pressure to act. A greater action pressure increases the probability that an action

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[5]This forms the basis for rationality of actions in all types of life, not just in humans. Plants behave predictably because the rules governing their responses are well known. As one increases complexity in the studied organism, one also increases the complexity of the behavioral rules. The number of items to be considered in a cost-benefit analysis grows as the complexity of the organism grows.

is taken. This last statement can be understood in terms of cost-benefit analysis. A higher action pressure increases the internal costs of not acting, thus increasing the benefit payoff merely for acting. If the pressure to act continues to increase, it will eventually increase to the level of overcoming the other associated costs — resulting in an action.

To tie this in to terrorism, the stimuli are the external experiences of the person. Each stimulus encourages the person to act in one way or another, depending on that single stimulus. As individuals have different sets of experiences, the preferred action may differ from person to person, but all responses are from the same set of possible responses. Greater coherence among the stimuli — the more often the person receives the same stimulus or similar stimuli suggesting the same action — increases the likelihood that the person will react. Thus, being pulled over once by the police for no apparent reason elicits a much smaller motive for action than repeated infringements. An economy that enters recession repeatedly increases the pressure of the individuals to act against the government with a greater probability than an economy that slightly drops into recession rarely. A state that passes ethnicity-based exclusionary laws repeatedly increases the action pressure of those excluded more than in a state with a long, continuous history of strong civil liberties.

Thus, at the individual level, the amount of action pressure present is directly, *and positively*, related to the probability of the individual acting. The probability of action can be reduced by increasing the costs associated with a specific action, but eventually action will result if the action pressure continues to increase; according to well-established psychological theory,

everyone has a breaking point, just as any balloon will burst if enough air is pumped into it (Biderman 1960; Farber, Harlow, and West 1957).

Regimes that do not allow the pressure to gradually reduce itself in myriad ways increase the likelihood that the balloon of pressure will violently burst. This suggests that established democracies, with well-established political processes, have a lower probability of experiencing the bursting balloon phenomenon. The pressure to act by the people is kept small in comparison to the rupture point of the political system.

4.2.2 Force

The physical concept of force also has an analogy in the Pressure Model of Terrorism. According to physicists and chemists, force is more fundamental than pressure; that is, pressure is usually defined in terms of force — mean pressure, $\bar{P}$, is the amount of force applied per unit of area, as shown in Equation 4.1. This is equivalent to defining force in terms of pressure and area. In terrorism terms, if we define force as the total amount of force applied to a regime to change, then it is clear that the mean pressure in Equation 4.2 refers to the action pressure described above and the area in Equation 4.2 refers to the number of people affected by the action pressure. Thus pressure corresponds to the effects of the individual, while force corresponds to the effects of that pressure on the aggregate grouping.

$$\bar{P} \;=\; \frac{F}{A} \tag{4.1}$$

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$$F \;=\; \bar{P} \times A \qquad\qquad (4.2)$$

$$F \;=\; \sum_{i \in Population} P_i \qquad\qquad (4.3)$$

There is no reason to believe that the action pressure will be constant across the population. Thus, the total force on the regime to change is merely the sum of the action pressures felt by the individual persons ruled by that regime (Equation 4.3). Whether or not the regime actually changes depends on its own cost-benefit analysis of the events as to whether an action will net a reduction in oppositional force or not. That is why a populous state has such a high level of inertia; large states have more citizens to consider in their decisional calculi.

One final note before moving on to examining the consequences of the model — the distribution of action pressures. Areas of higher pressure behave differently than areas of lower pressure. In meteorology, areas of high pressure result in few clouds and relatively extreme temperatures, whereas areas of low pressure result in many clouds and relatively moderate temperatures. Determining the average barometric pressure for the entire state helps little in the way of forecasting the weather. Only when the pressure for a smaller geographical region is known can a reasonably accurate forecast be made. The same is true of action pressure. Knowing the average pressure of action for an entire state tells little by way of being able to predict an outcome. However, knowing regional average action pressures allows better forecasting. If all of the action pressure exists in a small area in the state, the chance of regional action is much greater than if that pressure were uniformly distributed.

For instance, and without calculation, it is apparent that the United Kingdom in the 1970s had a relatively low average pressure of action. The Cornish were content. The Welsh were content. The English were content. Even the Scots were content. The only area of high action pressure was Northern Ireland, specifically the urban centers of Belfast, Derry, and Portadown. If we only looked at the average for the entire state, there would be little expectation that a terrorist campaign could have occurred. It is only when we increase the resolution of our scrutiny that we can identify the areas that would be of higher probability of terrorism — the Northern Ireland urban centers. In short, terrorist activity is fundamentally a local phenomenon, even though that local phenomenon is affected by broader — in a geographic sense — factors at both the state and the system level.

4.3 Theoretical Consequences

The above model offers several consequences, most of which are described in the literature. However, some of the consequences do conflict with some areas of the existing literature. The major strength of the theory is that it gives a unified, behavioralist explanation for group-, state-, and system-level factors.

4.3.1 Group-level Consequences

Ethnic Competition. Medrano (1994) provides overviews of the two competing theories of ethnic competition: Ethnic Competition Theory and

Ethnic Segregation Theory. The first states that conflict levels will increase if identifiable ethnic groups compete for the same economic and political opportunities. The latter holds that ethnic conflict will increase when the ethnic groups are kept separate as they will have a greater chance of forming a solid identity that they are better able to put at opposition to the "other". They cannot both be true in every case, as they contradict each other to a certain extent. The Ethnic Segregation Theory suggests that mixing the competing ethnic groups should reduce the number and extent of ethnic conflict, whereas the Ethnic Competition Theory suggests the opposite (Hechter 1999; Olzak 1992; Tilly 1991). The Pressure Model of Terrorism agrees with Ethnic Segregation Theory. To see this, let us examine the Ethnic Competition Theory in light of the proposed model.

The key concept in the PMT is action pressure — the pressure an individual feels to act in response to a series of external stimuli, especially to perceived inequalities. A greater inequality, especially on the more salient issues, increases the probability that an action will be taken to correct that inequality. These inequalities can be political, economic, or judicial. The greater the number of these inequalities felt by an individual, the higher the chance that individual will act. Moving from the individual level to the group level, a group with a higher average action pressure will have a greater probability of acting in response to those accumulated inequities.

The Ethnic Competition Theory asserts that when groups are mixed and competing for the same limited resources violent conflict has a higher probability of erupting. The PMT disagrees with this conclusion. When ethnic groups compete for the same resources on a local level, mixing of

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the ethnic groups occurs. That is, they interact with each other to a much greater extent than they would were they separate (Jenkins 1986; *cf.* Bélanger and Pinard 1991). This increased interaction decreases the probability that like-minded individuals with higher than average action pressures will come together. Thus, while small numbers of individuals may have high action pressures in the Ethnic Competition Theory, they are less likely to form a group. The actions performed to reduce the pressure to act will tend to be individual actions and not group actions. Furthermore, increased mixing of ethnic groups dilutes the total pressure of action. Without the close aggregation of similar individuals with high action pressures, a conflict campaign has a much lower probability of starting. This conclusion is in agreement with Galam (2003) and others (Crenshaw 1981; Douglass and Zulaika 1990; Funes 1998; Ross 1993), who demonstrate that terrorist groups (or any illicit group, for that matter) require large contiguous areas of support to operate.

This is not to say that neighborhoods are too small to create such groups. On the contrary, the evidence is quite clear that neighborhoods are of sufficient size to allow clustering to occur. The Troubles of Northern Ireland centered on the ethnic neighborhoods — both Protestant and Catholic. The parades of the Orange Order and their associated groups purposely wended their way through the Catholic neighborhoods of Portadown, Londonderry, and Belfast (Coogan 2002).

The Ethnic Segregation Theory holds that separating ethnic groups increases the chance of violent action between them (Friedrichs 1998; Hechter

1978; Medrano 1994). The Pressure Model of Terrorism supports this assertion. Concentrating an ethnic group allows any action pressure to be common to the entire group. Thus, if one member has a high pressure to act as a result of some inequality, there is a much higher likelihood that many around him do as well. Thus, the entire region will tend to have a higher action pressure. Regions with higher action pressures tend to be more conflict-prone.

Relative Deprivation. Gurr (1970) explains that the primary reason men rebel is that they perceive an increasing difference between what they have and what they think they deserve.[6] This is moderated or exacerbated through the salience level of the issue. Issues closer to the core of the person have a higher salience than those further away. Thus, incursions on a person's religion have a higher salience in much of the world than do incursions on driving rights. Support for this comes from the fact that no terrorist organization has yet to be founded on a call for driving rights, yet there are many who call for religious freedom for themselves (or a crusade against others). Furthermore, according to Gurr, this increasing difference between expected and actual is all that counts, not what causes the difference to increase. Using the terms of the PMT, relative deprivation increases action pressure. The difference between the expected levels and the real levels directly correspond to the pressure a person feels to act to reduce the level. The salience of the issue acts as a multiplier in that highly

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[6]The theory of relative deprivation did not begin with Gurr, however. Davis (1959) and Runciman (1966) both based their earlier work on Stouffer, et al. (1950), which was an in-depth examination of the effects of entering the Army from civilian life.

salient issues are more effective at increasing the pressure, while less salient issues require a much higher relative difference to effect a change.

4.3.2 State-Level Consequences

Democracies. One of the paradoxes about current research is that democracies are supposed to both have lower rates of terrorism than autocracies and higher rates of terrorism than autocracies. Democracies are to have lower levels of terrorism than autocracies because there are many other options for change in society than violent action. The Social Contract and the Rule of Law also retard violent actions in a democracy, as does political socialization.[7] Democracies are also supposed to have higher levels of terrorism than non-democracies because democracies are more open, thus allowing for terrorist groups to freely travel through the state, and because democracies are less likely to be able to fully suppress a terrorist group because of democratic norms and structures in the state (Gurr 1988, 1990; Ross 1993).

The Pressure Model of Terrorism allows for and explains these conflicting tendencies in democracies while keeping the actions tied to the actors. The democracy in itself does not increase the level of action pressure. It only affects the cost-benefit calculus taken by the individuals. The democratic judicial structures of the state reduce the cost of action because the

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[7]Crenshaw (1981) and others (Gurr 1979, 1988, 1990; Ross 1993; Turk 1982) note this pacifistic effect of democracies, yet they conclude that democracies should still have higher levels of terrorism within its boundaries.

state follows a set of well-defined procedures resulting in a well-known upper penalty for the action. The highest penalty in a liberal democracy is the loss of an individual life. Autocracies can inflict much higher levels of punishment, including communal capital punishment. Saddam Hussein's chemical action against the Kurds and the Shi'ites demonstrates this clearly as do the bulldozer responses of Israel against the Palestinian suicide bombers (Pape 2005).[8] Higher costs to action require a higher action pressure before actions seem cost effective.

The openness of a liberal democracy also allows for those individuals with higher levels of action pressure to find each other more easily, thus possibly creating a localized region of high pressure. Repressive autocracies can either keep their citizens from interacting to any great degree, thus directly restricting freedom of association, or they can seed the population with government informers, thus indirectly restricting freedom of association through a chilling action. According to the model, freedom of association is a positive correlation to terrorist activity, as found in liberal democracies (Bueno de Mesquita 2005a). However, so are inefficient restrictions on it, such as found in anocracies. Strong, highly organized autocratic regimes can effectively keep domestic terror cells from forming. Democracies and anocracies cannot (Crenshaw 1981; Galam 2003; Ross 1993).

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[8] While the example of Israel does seem to contradict the assertion that liberal democracies cannot impose communal punishment, the categorization of Israel as a liberal democracy is problematic. While they are a liberal democracy within Israel proper, the occupation of the Palestinian territories is not within the tradition of liberal democracies (Pape 2005).

Any healthy political system has mechanisms in place for interest aggregation (Almond 1958, 1966; Shambaugh 1996). The political openness of democracies allows for interest groups and political parties to serve this function. In fact, in the state with the highest level of terrorism, interest groups flourish.[9] How does the PMT explain this paradox? Quite simply these interest groups serve to unite those with similar positions in society. That is, they allow those feeling high pressure to act to come together, thus increasing the regional level of pressure.[10] Higher levels of regional pressure lead to higher probabilities of violent conflict. Thus, while it appears that interest groups and political parties serve as retardants on violent conflict, that is only true for as long as they are able to reduce the action pressure on the individuals within the group. Thus, an interest group that fails to get any of its most salient problems resolved has a much higher chance of resorting to terrorism.

Furthermore, should the action pressure gradient within the group become great enough, i.e. the differences between two factions within the group increase to too great a level, a schism may occur. Such splits result in two internally-cohesive groups, one using legal-political means to achieve their goals, the other using illicit-extra-political means. This has been observed (Douglass and Zulaika 1990; Lacquer 1977; Ross 1991; Weinberg 1991). Such a split has been seen in the reactions of Hamas and Islamic Jihad in response to Israel's overtures toward the PLO (Bueno de Mesquita

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[9]That would be the United States.

[10]While the term "region" refers to a group of people connected in *some* manner, the geographical definition of region remains the most important factor. However, with the increasing importance of the Internet, virtual connections will become more important in the future. We are already seeing evidence of this (Galam 2003).

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2005a). Such a split also occurred at the start of The Troubles in Northern Ireland. The membership of the "Official" (or "Original") IRA felt different amounts of pressure to act. When the leadership of the IRA failed to act in a manner consistent with the wishes of several members, those members split off in 1969 to form their own group — the Provisional IRA. It is also evident that the split had more than just a passing influence on the latter group's move towards terrorism (Coogan 2002; Feeney 2002; Murray and Tonge 2005).[11]

For this reason, the creation of a political party out of a terrorist organization may actually increase the violence of the terrorist organization, rather than decrease it, as the schism removes the more moderate faction from the group.[12] A similar result would naturally occur when the state uses a conciliation strategy; those more prone to use the political process would accept the offer, whereas the more extreme element would reject it out of hand, thus creating a political schism and a group more intent on using terror (Bueno de Mesquita 2005a).

Thus, while democracies do not, per se, increase the action pressure on a group, the structures in a democracy reduce the cost of the associated

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[11]Furthermore, two additional splinterings occurred in IRA history. The Continuity IRA and the Real IRA both splintered from the Provisional IRA. The Continuity IRA formed in 1994 as a response to the Provisional IRA entering into a ceasefire with the British. The Real IRA formed in 1998 as a reaction to the Provisional IRA entering into the negotiations that resulted in the Good Friday Accords of 1998. Both of these two splinter factions were more violent than the Provisional IRA of the time (Coogan 2002; Feeney 2002; O'Ballance 1981; Stevenson 1996).

[12]For a general exploration of these effects already in the literature, see Weinberg (1991). For specific examples, see Coogan (2002) for the Catholics of Northern Ireland, Jenkins (1986) for the Jurassiens of Switzerland and Douglass and Zulaika (1990) for the Basques of Spain.

Table 4.1: Cross tabulation of regime type vs. incidence of terrorism in Western Europe, 1945-2000.

	democracy	mid-realm	autocracy	total
terrorism that year	78	26	23	127
	(4.5)	(1.5)	(1.7)	
no terrorism that year	1656	1720	1343	4719
	(95.5)	(98.5)	(98.3)	
total state-years	1734	1746	1366	4846

Notes: Numbers in parentheses represent column percents. Democracies are significantly more prone to outbreaks of terrorism than the other two types of regimes ($\chi^2 = 37.41$; dF $= 2$; p ≤ 0.001). The regime type data is from Polity IV (v2002), whereas the terrorism data is from Minorities at Risk (v1.03). Regimes are democracies if they score +6 or higher on the POLITY2 variable; autocracies, -6 or lower; and mid-realm, between -5 and 5, inclusive.

action. It is this reduced cost that explains why democracies have a higher incidence rate of terrorist acts than other regime types (Table 4.1).

4.3.3 System-Level Effects

Globalization. What effects should globalization have on terrorism propensity according to the Pressure Model of Terrorism? Where democratic structures and norms only reduced the costs associated with action, globalization both raises the action pressure and reduces the associated costs. It increases the pressure to act by increasing apparent economic inequalities, employment stresses, and cultural and religious pressures. It reduces costs by increasing the flow of ideas, persons, and money. Why?

Globalization is the increase of linkages between sub-state and non-state actors (Cha 2000).[13] It is not an event, but a trend. Some liken it to medievalism, in that state sovereignty is no longer an absolute and that overlapping domains of dominion and spheres of suzerainty exist (Kobrin 1998). The primary effect of globalization is change. People are faced with new ideas. They must deal with new employment emphases. They must confront new incursions into their core (Kellner 2002). The state is unable to fully moderate these incursions as another effect of globalization is the flattening of the state system, That is, the number of institutions between the individual and the system are effectively reduced, thus the state is unable to shield the individual from the vagaries of the world (Farazmand 1999).

For economists, globalization is the process by which the goal of a completely integrated world market is achieved. It is driven by private interests, not state actors (Julius 1997). The effect on the state and its citizens vary depending on the costs of integration and the wealth of the state. When integration costs are high, that is when the costs of transporting manufactured goods across state borders are high; each state has extensive manufacturing and industry to meet domestic needs. Autarky is possible in this stage. At a certain critical transportation cost, however, a core-periphery system forms. Those states at the periphery suffer a decline in manufacturing production because they are unable to reduce their transportation costs to compete with those states at the core. Core states flourish because they are capable of transporting cheaply enough

[13]Interdependence, on the other hand, is the increase in linkages between state actors.

to overcome their (possibly) higher manufacturing costs to economically compete with periphery states. Reducing the transportation costs further inverts this; extremely low transportation costs allow the poorer states to compete in a more favorable environment,[14] thus resulting in manufacturing and employment losses for the core states (Axford 1995; Krugman and Venables 1995). Evidence of this third stage of globalization is clear. The current trend in outsourcing American jobs to third-world countries is a result of inexpensive transportation costs. Transportation does not necessarily refer to physically transporting an item from one place to another. It also refers to the virtual transportation of goods and services.[15]

That is globalization. That also explains why it increases the stress on individuals. During the second phase, the wealth gap between the periphery and the core increases. During the third phase, the core states lose their market share. Thus, in both stages states feel economic pressures.

What does the PMT say about globalization? If the state feels economic pressure, so too does its citizens. According to the theory, should that pressure be distributed uniformly across the citizens, not much will happen. The citizens may call for the ouster of the current leadership. They may protest the unequal distribution of wealth in the world. But, as there are no pockets of intense action pressure, terrorism will not occur.[16]

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[14]The periphery states' very low manufacturing costs are primarily due to low ambient income levels in the states.

[15]Outsourcing computer support calls to India is an example of virtual transportation.

[16]If, however, the core-periphery income divide becomes too extreme, large pockets of high action pressure form in opposition to the state system. As this research concerns itself only with ethnic terrorism against states, this is beyond the scope of this work.

However, if certain identifiable groups receive the lion's share of the pressure, they will likely act. When those identifiable groups are an identifiable ethnic group, this economic stress will be identified as a "concrete grievance" against the state (Crenshaw 1981). Such evidence comes from Latin America scholars who correlated economic trends with increased state instability and political violence (Booth 1991; Jenkins and Bond 2001; Lindenberg 1990). However, this finding is not merely a feature of Latin American political systems; economic stress, especially when it occurs along ethnic lines, is a major factor in causing terrorism (Krippendorff 1979).

The history of Sardinian independence demonstrates this point well. The history of the unification of Italy was the story of the prosperous north repressing the impoverished south — Sardinia included (Gooch 2001). Thus, even though the Italian state offered Sardinia industry and manufacturing enterprises upon which to found the economic strength of Italy, those industries were environmentally dangerous, those manufacturing jobs were always fewer than promised, and the profits from those businesses went to continental Italy — not insular Sardinia. The result of this disillusionment with capitalist Italy was the growing connection between the Sardinian separatists and the socialist Red Brigades in the 1970s. The result was a short-lived campaign of terror in Sardinia during the years 1977–78 (Krippendorff 1979). The Sardinian example demonstrates economic differentials between one identifiable group and a second can serve as a catalyst for violent action.

Thus, the effects of globalization on the individual both increase the action pressures felt and decrease the costs of acting. The increases come from changes to the economic structure, increases in unemployment, and cultural pressures. The decreases come from open borders allowing funds, weapons, and people to be easily transferred.

4.4   Chapter Summary

This chapter formulated the Pressure Model of Terrorism and explored some of its consequences vis-à-vis the existing literature. Quite simply, the model is a rational choice model containing a mechanism to explain the actions of the aggregating levels — group, state, and system — in terms of the individual level. In other words, while other researchers have provided rationale as to what affects the probability of terrorism at the different levels, this model ties them all together in a simpler manner, while providing predictions that go beyond what we already have.

The basis of the model is the pressure of action felt by the individual. A higher action pressure produces a greater cost of not acting, which increases the probability of the individual acting. The pressure created in a person depends on the salience of the stimuli and the coherence of multiple stimuli. Stimuli add vectorially; that is, stimuli pressuring along the same dimension sum. Those acting in opposing directions or in other directions do not.

The group is, in many ways, the individual writ large. Group actions are due to individual actions. When the average action pressure in a group exceeds the costs of acting, the group will act as a whole. This fact, in itself, produces two results. First, when a group splits, if there is a correlation between individual action pressure (what rational choice modelers call the individual's ideal point) and the group in which that individual ends up (what is termed the action point of the group), the result will be one moderate group and one extreme group — a higher probability of terrorist action. The schism between the Official IRA and the Provisional IRA reflect this.[17]

The effects of the state's regime type (state level) and the effects of the current trend of globalization (system level) become more apparent when examined at the individual level. According to the PMT, democracies should have higher levels of terrorist activities than non-democracies for two reasons: democracies reduce the cost of action, primarily through their devotion to the Rule of Law; and democracies have institutionalized ways in which individuals can freely associate, thus allowing a greater ability for like-minded individuals to congregate.

Globalization both increases the pressure on the individual and decreases many of the associated costs of acting. Employment, economic, and ethnic stress all increase the pressure to act, while open borders allow groups and funds to meet each other.

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[17]Other examples of a similar phenomenon include the partitioning of the Jurassien partisans into three different groups (FD, RJ, and FLJ), the 'political to extra-political' movements (and back again) of the ETA, and the effects of the creation of the *Sendero Luminoso* on the Peruvian Communist Party (PCP).

The Pressure Model of Terrorism provides the mechanism for how causes at one level of analysis affect behaviors at another. Specifically, it provides a path of action between the individual level and the aggregate levels. Where this chapter laid out the model, the next chapter proposes several testable hypotheses from this chapter's discussion and tests those hypotheses. In Chapter Six, I will actually test those propositions created as a result of the Pressure Model of Terrorism.

Chapter 5

Hypotheses, Methods, Data, and Statistical Models

> The effort to understand the universe is one of the very few things that lifts human life a little above the level of farce, and gives it some of the grace of tragedy.
>
> Steven Weinberg

THE previous chapter presented the Pressure Model of Terrorism as an explanation of the linkages between the four levels of analysis, showing how the effects at the aggregate levels are due to the factors affecting the individual level. The previous chapter also briefly sketched a few scientific

(in the Popperian sense) hypotheses.[1] This chapter specifically presents those hypotheses with their underlying logic of justification. This model relies on previous studies of the individual level explicitly. I assume that the previous research is appropriate. Thus, this model bases its hypotheses on those previous finding. Hypotheses in each of the other three levels are presented in this chapter.

However, while the hypotheses are a logical result of the theory, they still must be tested. This analysis necessitates gathering data and utilizing appropriate statistical methods to glean the needed results. The remainder of this chapter deals with the difficulties inherent in this analysis. These difficulties categorize themselves into data dilemmas and statistical predicaments. The former deal with idiosyncratic problems concerning the datasets chosen. These include partial datasets, overlapping measures, and proxy variables. The latter deal with determining which statistical model is most appropriate in this sphere, and, in the absence of a clearly superior model, establishing appropriate solutions. At first blush, event history analysis would seem the perfect statistical model for this data structure. However, there are enough unmet assumptions that another method must be used. Using several quasi-appropriate methods produces results that are more robust — and that is the fundamental goal of research.

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[1]According to Karl Popper, a hypothesis is scientific if it is falsifiable (testable), empirical (measurable), and non-specific (Popper 1959).

5.1 Hypotheses and Rationale

5.1.1 Group Level

Ethnic concentration. The two competing theories are Ethnic Concentration and Ethnic Segregation (Medrano 1994). The Pressure Model of Terrorism supports the latter theory. A greater level of compactness creates a greater feeling of unity within the group. It also allows those with similar goals and identities to congregate and become an identity. Both of these cause a greater chance for the ethnic group 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[2] variable GC2 measures whether or not the group is spatially contiguous (Davenport 2003).[3]

H_{G1}: Regionally compact groups will have a higher likelihood of using terrorism.

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[2]For the sake of brevity, all variables taken from the Minorities at Risk dataset using MARGene v1.03, are labeled by their Minorities at Risk variable name and the abbreviation MAR.

[3]Specifically, 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.

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Relative deprivation. Gurr (1970) hypothesized that men rebel because of relative deprivation — the difference between what a person believes he or she deserves and what he or she actually receives. For purposes of this research, relative deprivation will be measured in terms of economic differentials between the ethnic group and the state at large.

One way of measuring this is to find the actual average incomes for the state and for the nation, and then compare them. However, this is quite problematic; 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 (Davenport 2003). Possible values for the ECDIFXX variable range from -2 (a strong economic advantage) to 4 (an extreme economic disadvantage). According to extant theory, a value further from 0 indicates 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) (Crenshaw 1981). However, even though the literature does not specify that economically disadvantaged groups are more likely to use violence than economically advantaged groups, the Pressure Model of Terrorism does. Groups discriminated against feel the pressure to act to right this wrong. Economically advantaged groups will only rise up when their advantages are threatened.

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H$_{G2}$: Groups that are economically disadvantaged will have a higher likelihood of resorting to terrorism.

H$_{G3}$: Groups that lose their economic advantages will have a higher likelihood of resorting to terrorism.

Ethnic definition. One necessary aspect of the group that makes it a group are the differences between 'it' and the 'other' (Mellor 1989). These difference do not even have to be real; perceived differences are sufficient to create a feeling of 'out-group-ness'. As every group in this study is already determined to be a group, either in reality or merely in perception, this may be superfluous. However, MAR allows a measurement beyond a simple dichotomous variable. It measures the distance between the group's and the state's customs. A separate set of customs is a strong aspect of belonging. Those individuals with a set of common customs tend to identify themselves as belonging to a group (Mellor 1989). The MAR variable ETHDIFXX measures both the strength of the ethnic group'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 (Davenport 2003).

H$_{G4}$: Groups with a culture more separate from the containing state will have a higher likelihood of using terrorism.

Prior use of terror. It seems obvious that a group who had used terrorist tactics in the past would be more highly predisposed to using them

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in the future. However, how does this fit in the model? Prior use of ter-
rorism will either reduce the cost of a new use of terrorism or increase the
action pressure. It will reduce the cost if the organizational structure still
exists or if the individuals involved had committed the past action. That
is, there would be no need to recreate the necessary contacts to get the
terrorism *matériel*. Also, the line between not-killing and killing will have
already been breeched by those certain individuals. The Thanatos instinct
will already be active and prominent for them (Guggenbühl-Craig 2002).
The way in which previous terrorism use increases action pressure is if the
past, and the past's heroes, can be used as paragons. "Michael Collins
stood up for the Irish against the British overlords using terrorism," one
can hear the Continuity IRA recruiter say; "It is time for us to follow in
his illustrious footsteps."

H$_{G5}$: Ethnic groups with a history of using terrorism will have a higher
likelihood of using it again.

5.1.2 State Level

Level of democracy. While the current literature seems rather contradictory
on this aspect, the Pressure Model of Terrorism clarifies the conflicting
roles state democracy plays. Succinctly, democracies do not increase the
action pressure, they only reduce the action costs. Thus, there is an effect
based on both the bare fact that the state is a democracy and the level of
structural democracy in the state.

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Testing both of these statements at once is not as difficult as first appears. Five variables are used to test these hypotheses. All five come from the Polity IV dataset, which provides an aggregate measure of the level of system democracy in the state based on three component indicators: competitiveness of political participation, openness and competition of executive recruitment, and the constraints on the chief executive (Marshall and Jaggers 2002: 13). This is not a measure of democratic norms within the state, nor is it a measure of personal liberties. It is a measure of how democratic the structures of the state are. The first three variables used are dichotomous variables indicating whether the state is democratic (+6 or greater on the POLITY2 variable in the Polity IV dataset), autocratic (-6 or less), or other (Hegre 2000; Jaggers and Gurr 1995; Marshall and Jaggers 2002).[4] The fourth variable is the level of democratic structures in the regime.

With this formulation, it is expected that the democracy dichotomous variable will have a negative coefficient with respect to autocracy (in agreement with Benoit 1996), while the *level of democracy* should have a positive coefficient. This indicates that democracies, *ceteris paribus*, should have a lower level of terrorism simply because they are democracies; however, a greater level of democracy within the democratic state — i.e., the greater

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[4]The normal convention, at least according to the Polity project, is to term those states which are neither democratic nor autocratic as anocratic (Marshall and Jaggers 2002). There is some question as to whether this is appropriate, as anocratic states are defined in the literature as having little or no structure, as incoherent regimes (Davenport 1999; Eckstein and Gurr 1975; Zanger 2000). Some of these states, however, have lasted several decades without appreciable shift. Japan, South Africa, and Liberia all remained in this scoring region for seven decades each. I prefer to term them either as 'other' or as 'middle realm' states. Neither of these terms caries with it any preconceived notion about those states other than that they are neither democratic nor autocratic.

the number of democratic institutions a state possesses — should produce a higher chance of terrorism within the state. That is, while a democratic state has a lower chance of spawning a terrorist group, all things being equal, once a group starts, the more democratic state is less able to stop the terrorism.

Furthermore, a change in the level of democracy in the state should also be a harbinger of increased terrorist activity. Crenshaw (1981) notes that when democratic states crack down on the terrorist groups, they are exposing themselves as being not as democratic as they purport to be. This lowers the legitimacy of the state and may raise the legitimacy of the group.

H_{S1}: Groups existing in a democracy will have a lower likelihood of using terrorism.

H_{S2}: Groups existing in a state with a higher level of democracy will have a higher likelihood of using terrorism.

H_{S3}: Groups existing in democratic states moving away from democracy will have a higher likelihood of using terrorism.

Economic strength. Poor states have problems controlling their territories. Wealthier states have a more content population (Gurr 1993). The first suggests that poor states impose lower action costs on their citizens. The second suggests that wealthier states tend to have lower action pressure because their citizens are comfortable with their station in life. If we measure state wealth using GDP per capita, we can expect states with a

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lower GDP per capita will have a higher probability of having an ethnic group become a terrorist group. Thus, citizens in a state with decreasing GDP per capita will have a higher pressure to change this, perhaps by becoming terrorist to bring about regime change.

H_{S4}: Groups existing in states with a decreasing GDP per capita will have a higher likelihood of using terrorism.

Urban level. Cities offer two things that terrorists need: a recruitment base and targets. Large urban centers tend to contain the poor, the downtrodden, and the frustrated (Conley 1999; Ehrlich and Liu 2002; Ross 1993). These people have high pressure to act, thus urbanization should be positively correlated with terrorism propensity. Urban centers also contain targets: office buildings, national museums, and people (Wilkinson 1977). For this reason, too, level of urbanity should be positively correlated with terrorism.

H_{S5}: A greater level of urbanization in a state increases the probability that a group will resort to terrorism.

Unemployment and the adolescent: According to the Pressure Model of Terrorism, those who are unemployed suffer from an increased action pressure to right their condition. However, it would not be the unemployment rate, per se, that increases the action pressure, it would be the increasing of the unemployment rates. Humans are very adept at adapting to

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their surroundings, including economic hardships.[5] Furthermore, different states seem to have different 'background' unemployment levels. For example, the current 10% unemployment level in Spain is definitely tolerable for the Spanish as their average rate over the past decade is slightly above this figure. However, that same unemployment rate in Zambia would be a welcome respite against their current 50% rate, and it would be *devestating* to the United States, where it would constitute a doubling of the current unemployment rate (CIA 2005). Thus, it is not the current level of hardships, that really matter. however, when those hardships increase, humans feel the pressure to right the situation (Wiley 1992).

H_{S6}: Increasing unemployment rates positively correlate with terrorism rates.

Finally, as explained earlier, the youth, especially young males, are especially prone to violence. This is due to many reasons, including immaturity, high stress levels, lack of economic equality, and biological pressures. The age group most at risk of these pressures is the 15–24-year-old group (Hagan and Foster 2001). The youth form a pool from which action pressure can grow. As such, the youth percentage is the variable of interest, not the change.

H_{S7}: Higher rate of the youth (15–24) in a state positively correlates with higher probabilities of terrorism.

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[5]Nietzsche posited the existence of two motivating forces in us: a will to power and a will to survive. It is this will to survive that allows animals (including humans) to adapt to environmental circumstances easily (Norris 1980).

5.1.3 System Level

Globalization. Of all the concepts presented herein, globalization is the most difficult with which to deal. There is no single specific definition to use. There are no long term datasets of which to avail myself.[6] Both of these present prominent obstacles. Thus, I must determine a fair proxy measure for globalization. Such a measure must be increasing. It should also increase at an increasing rate. As my globalization proxy, I chose to use total trade in the state. This proxy is reasonable for two reasons. First, it meets the functional form required above. Second, globalization is first, and foremost, a trade-driven process. Thus, the correlation between trade and globalization should be extremely high (Julius 1997; Krugman and Venables 1995).

H_{Y1}: Higher levels of globalization in the state produce higher probabilities of terrorism.

5.1.4 Terrorism

Dependent variable: The final variable in need of 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, unfortunately it only is coded from 1990 onward. The MAR project also has the variable REBEL, coded back to 1945; unfortunately, it is only coded every five years. However, the value recorded is the highest level of

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[6]The most promising globalization dataset, A. T. Kearney, only has indicators going back to 1995 and full indices going back to 2003.

rebellion during those five years. Thus, REBEL values 0 and 1 indicate no terrorism campaign took place during that five-year period (Davenport 2003). Any other REBEL value indicates a campaign *could have* taken place. Furthermore, as the MAR definition of terrorism is more liberal and inclusive than the one I used, relying on the REBEL variable to help narrow down the years I had to examine would not introduce error.[7]

For each five-year span with a REBEL value greater than 1, I examined newspaper reports, performed Lexis-Nexis searches, explored Keesing's Record of World Events, parsed the International Crisis Behavior dataset, and culled the necessary information from region-specific history books to determine if a terror campaign, as defined in this research, actually did occur for each of those five years and, if so, when.

5.2   Full Model Equation

$$
\begin{aligned}
f(Y_t) \;=\; & \beta_0 \\
& + \; \beta_1 \times \text{TERROR\_PRE} \\
& + \; \beta_2 \times \text{YOUTHPCT} \\
& + \; \beta_3 \times \text{GROUPCONC} \\
& + \; \beta_4 \times \text{ECONEG} \\
& + \; \beta_5 \times \text{ETHDIFXX} \\
& + \; \beta_6 \times \text{DEMOC}
\end{aligned}
$$

[7]According to private correspondence with Graduate Assistant Carter Johnson, the MAR project defines terrorism as violence that at least partially targets civilians.

$$+ \quad \beta_7 \times \Delta\text{DEMOC}$$

$$+ \quad \beta_8 \times \text{TRADE}$$

$$+ \quad \beta_9 \times \text{URBANPCT}$$

$$+ \quad \beta_{10} \times \Delta\text{UMEMPRT}$$

$$+ \quad \beta_{11} \times \Delta\text{GDPCAP}$$

$$+ \quad \epsilon$$

5.3   Statistical Concerns

The following section deals with statistical concerns, including the sources of the datasets employed, the problem of different temporal domains for the datasets, the merging of two trade datasets, and the statistical models utilized in the test.

5.3.1   Datasets Used

The Minorities at Risk dataset (2002) provides information on politically active communal groups with populations in excess of 100,000 or in excess of 1% of the state's population. The current number of such groups in Western Europe is 13. However, as this research only examines ethnonational groups, the Roma must be excluded from the list. And, as they are minority groups in three separate states (France, Spain, and Italy); this reduces the number of examined groups to 10.

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The Polity IV (Marshall and Jaggers 2002) project focuses on the state, not the ethnic groups, with the primary focus being the formal structure of the government, specifically the numbers and levels of democratic and authoritarian structures in the state. While the proponents of the democratic peace thesis split their emphasis between the importance of democratic structures and of democratic norms, this research must focus on the structures. The Freedom House dataset could have been used to measure level of freedom in the individual states, and thus indirectly the democratic norms in the state; however, it only covers the years 1972 through the present time. As such, too many degrees of freedom would have been lost.

The remainder of the dataset uses data from several sources. The World Bank (2003) provides the economic data — the GDP in constant 1995 USD and the population figures. The United Nations (various years) provided the percent of people aged 15–24, and the urban percentage. The OECD (1972, 1993, 2004) provides the unemployment data. Barbieri's International Trade Database (1996, 1998) provides the data on trade between 1945 and 1992, while Eurostat (2005) provides trade figures for 1990–2000.

It needs to be acknowledged that these data sources are all not primary data sources, either. The International Labor Organization (ILO) gave the unemployment numbers to the UN, while the ultimate sources of the population figures were the individual states. Moreover, the Minorities at Risk, Polity IV, and Barbieri's data come from several sources. That is not to say that secondary sources are necessarily inferior to primary sources, but it does need to be acknowledged. Confidence in the MAR data and the

Polity IV data should generally be high, as they followed strict guidelines in creating the datasets specifically for the use of others.[8] Barbieri created her dataset for her dissertation work at Binghamton University. Thus, the Barbieri trade data is slightly more suspect than the other data, but that matters little in this research as it is only used as a proxy variable for the level of globalization in the state. The ramifications are discussed further later.

5.3.2 Availability

Unfortunately, not all of the data was fully available between the years 1945 and 2000. Unemployment figures only go back to 1959, urban percent to 1950, and GDP per capita to 1960. To solve this problem, three sets of models were run. The first included only those variables available to 1945. The second added urban population, thus restricting the temporal domain to 1950–2000. The third model added the change in GDP per capita and the change in the unemployment rate, resulting in restricting the temporal domain even more. Of the three models, even with the reduced time period, the last model should produce the best results, both in terms of significance and in terms of predictability. This is simply because the first two models suffer from specification bias.

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[8]While this may appear true on the surface, there are some inconsistencies in the Minorities at Risk coding, especially for the ethnic differentials index. In some cases, the differential for minority A in state B is different from the ethnic differential for minority B in state A. India and Pakistan quickly spring to mind. To account for these discrepancies, I examined the data closely to ensure that these problems did not exist in this subset of states.

5.3.3   Data Interpolation

Beyond abbreviated temporal domains, not all of the variables were perfectly dense. I used linear interpolation when either the time period between values was three years or less or the underlying variable was not expected to change significantly from year to year. Thus, percentage of youth was interpolated as was urban percentage. Other acts of interpolation were taken by the individual agencies providing the data. Thus, the World Bank used population figures provided by the individual state census bureaus and interpolated them using a complex formula that took into consideration the actual census figures, the birth and death rates, and the migration rates.

5.3.4   Trade Figures

Data for total national trade comes from two sources, Barbieri's trade database (1945–1992) and Eurostat (1990–2000). The overlap allows the disparate trade measures to be used in conjunction. Calculating the average ratio between the datasets during the overlapping time period offers the most straightforward manner in which to join the datasets (Mallows and Vardi 1982). Figure 5.1 shows how Barbieri's trade data and the ratio-adjusted Eurostat data compare. As the trade variable is solely acting as a proxy variable for globalization, it has external validity *in this role*, as the pace of globalization has increased exponentially over the years.
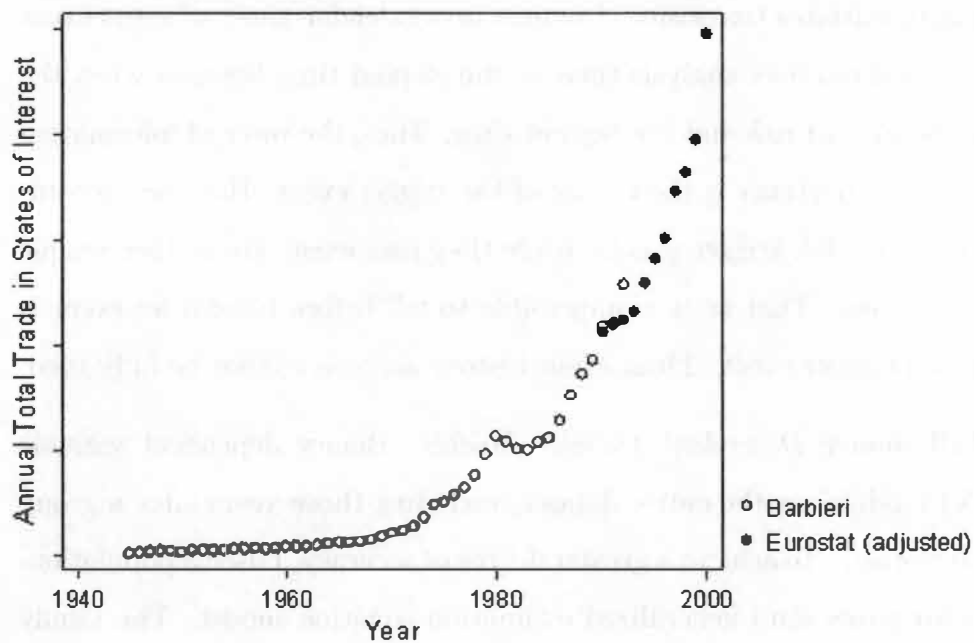
Figure 5.1: Comparison of Barbieri's trade data with ratio-adjusted Euro-stat data for the states under consideration.

Notes: Comparison of mean annual trade in study states supports the contention that the ratio-adjusted Eurostat data are comparable. Ratio = 1.258×10^9; Standard deviation of the ratio is 3.60×10^7 (0.29%).

5.3.5 Statistical Models

Two basic types of statistical models are often utilized in such research: binary dependent variable model and event history analysis. The first model uses the entire dataset, whereas the second only uses the information until the group initiates terrorism. The first uses calendar time, whereas event history analysis uses analysis time — the elapsed time between when the group became at risk and the current time. Thus, the piece of information of utmost importance is the timing of the trigger event. However, according to the model, trigger events, while they may exist, are neither unique nor predictive. That is, it is impossible to tell before hand if an event is an actual trigger event. Thus, event history analysis cannot be fully used.

Full Binary Dependent Variable Models. Binary dependent variable (BDV) models use the entire dataset, including those years after a group uses terrorism. To achieve a greater degree of accuracy, I used a population-averaged panel data generalized estimation equation model. The family and link functions for the logit model were the standard binomial and logit for the logit model (the canonical link for the binomial family), binomial and probit for the probit model, and binomial and complementary log-log for the complementary log-log model. The use of GEE over a standard time-series cross-sectional (TSCS) generalized linear model (GLM) logit or probit is that it allows one a freer hand in choosing the correlation structure.[9] For all three models, independent, exchangeable, and

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[9]The generalized estimation equation (GEE) methods also do not make the same assumptions as do the generalized linear model (GLM) methods. The GLM assumes independence among the records. GLM also assumes no correlation with the panels. The sandwich estimators only adjust the standard errors; they do not adjust the biased

autoregressive-1 correlation structures were examined to determine which produced the best fit as determined by model significance.[10] In all three cases, the autoregressive-1 correlation structure correction was expected to produce superior results, a priori, because of the inherent serial correlation in many of the variables and because of the memory of human groups (Hardin and Hilbe 2003).[11]

Using three different BDV models that supposedly measure the same thing allows me to test their suitability as models. As logit and probit functions differ only in the thickness of their tails, they should produce similar statistical findings vis-à-vis direction and statistical significance (see Figure 5.2). The coefficients should differ by a factor of approximately 1.70, as well. If not, then the applicability of the two symmetric models is called into question (Long and Freese 2003). There is, however, no statistical test to determine how far from 1.70 is too far. Furthermore, since both are symmetrical about $\lambda = 0.50$, events that rarely occur (such as terrorism)

estimates of the coefficients. GEEs do not make these assumptions. Correlation within the panels and across the panels is easily managed, as it is a part of the estimating equation. GEEs are also robust to misspecification of the correlation matrix. Because of these reasons, the GEE is a better choice than the GLM (Hardin and Hilbe 2003).

[10] An unstructured correlation structure would have offered the best comparison, but the models would not converge under the unstructured structure as there were too many parameters to estimate with the size of the dataset.

[11] The three correlation structures for the model with all variables (and years 1960–2000) produced Wald χ^2 statistics of 288.268 (independent), no convergence (exchangeable), and 2028.43 (AR1) for the logit; 3907.34 (independent), no convergence (exchangeable), and 6060.77 (AR1) for the probit; and 827.60 (independent), 53,340.83 (exchangeable), and 6386.82 (AR1) for the complementary log-log. In no cases did the unstructured correlation structure produce estimates due to divergence. Examining the correlation structure produced in each statistical model, it was obvious that there should be little difference between results using an independent structure and an AR1 structure, because the first off-diagonal elements in the AR1 structure were close to zero in all cases (logit: 0.0447; probit: 0.0203; complementary log-log: 0.0917).
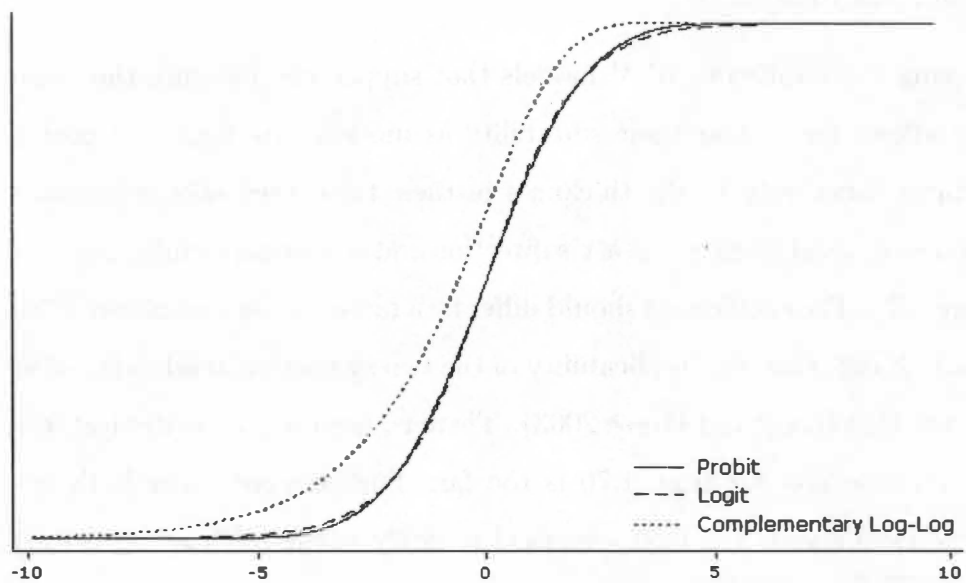
Figure 5.2: Comparison of the logit, probit, and complementary log-log graphs.
Note: The horizontal scale for the logit curve is diminished by a factor of 1.65 to emphasize the similarities between the two curves.

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will not be modeled well by either. The complementary log-log function is asymmetric; as such, 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, even in passing, with ordinary least squares regression are also familiar with R^2 as a measure of predictive ability of the model. Unfortunately, there is no true R^2 for any binary dependent variable models. In lieu of the R^2, some authors use prediction accuracy. However, as shown by Hosmer and Lemeshow (1989), even properly specified models can score low on tests of accuracy. They proposed their own test based on deciles of risk categories.

Were I 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 model fit. There are two problems with this. First, there is no *a priori* reason to believe that the cutpoint, λ, is 0.50; the appropriate choice of the cutpoint is a function of the costs associated with false positives and true negatives which can be determined through a calibration process (Venkatraman and Begg 1996). Second, since this model merely focuses on the effects of certain covariates on the propensity to use terrorism, determining the cutoff point is largely irrelevant. As such, a better solution is to fit a receiver operating characteristic (ROC) curve (DeLong, DeLong and Clarke-Pearson 1988; Hosmer and Lemeshow 1989). The value of 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).

In other words, the ROC curve shows how well the test reflects the factors that increase the probability of groups resorting to terrorism.

Partial Binary Dependent Variable Models. There is a variant of the above statistical model that may also shed some light on the factors contributing to terrorism. The partial model only uses the data prior to a group using terrorism. Thus, it better answers the question what caused the group to make the leap (or to slide a bit more). However, the main drawback to using such a model is the loss in degrees of freedom.

5.4 Chapter Summary

This chapter started by laying out the hypotheses to be tested and the rationale behind them. Thirteen hypotheses were proposed (as summarized in Table 5.1). Each was designed to test the Pressure Model of Terrorism and its conclusions. After the hypotheses were presented, I provided the full model and a brief discussion of the datasets used in this research and certain problems encountered while using them.

Finally, this chapter examined two types of binary dependent variable models to handle the data. The full binary dependent variable model is a simple logit-type model that uses the entire dataset to calculate the estimates of the coefficients. The partial binary dependent variable model is similar in form to the full model, but only examines the data until the group uses terrorism. In both cases, a logit, a probit, and a complementary log-log model will be run. This allows both a better determination of

Table 5.1: A schematic summary of the hypotheses proposed in this research enterprise.

Variable	Effect on Probability of Terrorism
Group Level:	
Group Concentration	Increase
Negative Economic Differentials	Increase
Changed Positive Economic Differential	Increase
Previous Use of Terrorism by Group	Increase
Ethnic Differentials	Increase
State Level:	
Democratic State	Decrease
Higher Level of Democracy in State	Increase
Autocratization of a Democracy	Increase
Decreasing GDP per capita of the State	Increase
Urban Level	Increase
Increasing Unemployment Rate	Increase
Young Male Percent	Increase
System Level:	
Globalization (Total Trade)	Increase

the suitability of the logit and probit, and a better determination of the robustness of the results.

Chapter 6

The Results

> The most exciting phrase to
> hear in science, the one that
> heralds new discoveries, is not
> 'Eureka!' (I found it!), but
> 'That's funny ...'
>
> Isaac Asimov

In the first section of this chapter, I motivate my choice of statistical model. In the second section of this chapter, the initial results for all three models are presented. However, as the complementary log-log model is theoretically better able to model the terrorism events, it is used to explore the data.

6.1 Motivation

Before we can delve into the results, two things must first be discussed in detail — the use of the complementary log-log link over the more popular logit and probit link functions, and the use of population-averaged generalized estimating equations (PA-GEE) over the more popular subject-specific generalized linear models. Both are issues of appropriateness to the data and to the questions at hand.

The logit is the popular link function of the social sciences. This is due to a combination of two factors — relative ease of interpretation and tradition. The actual formula for the logit link function is $\eta = \ln(\beta'x \,/\, (1 - \beta'x))$. In other words, the logit is just the logarithm of the odds-ratio for the probability of an event occurring to the probability of the event not occurring. Thus, the exponential of the coefficients estimated by a logit regression are interpreted as higher (or lower) odds that the event will occur given an increase in the value if the covariate. Thus, interpretation of the coefficients is all but trivial, especially if one speaks of odds ratios or of the underlying metric as opposed to probabilities. Furthermore, interpretation is made easier when one realizes that the estimated coefficients of the logit regression correspond to the effects of the covariates; that is, a positive logit coefficient implies that increasing the value of the covariate results in an increased probability that the even will occur.

The probit is the popular link function of the health and natural sciences for about the same two reasons. The equation for the probit link is

$\eta = \Phi^{-1}(\beta'\mathrm{x})$, which is just the inverse Gaussian of the linear combination of the covariates with the coefficients estimated by the optimization routine. While the coefficients of a probit regression are not as easily interpreted as the logit coefficients, the fundamental interpretation remains the same. If the coefficient is positive, then increasing the covariate increases the probability that the event will occur. If the probit coefficient is negative, then the probability decreases as the covariate value increases. Both back-of-envelope interpretations are the same as that of the logit.

These two also share something else in common — shape. Both the logit and the probit probability curves are of approximately the same shape (see Figure 6.1). In fact, when the independent variable is scaled by a factor of 1.65 for the logit, as was done in the graph (Figure 6.1), the two curves are virtually indistinguishable.[1] Thus, one can, *a priori*, expect that separate logit and probit regressions should produce coefficient estimates and standard error estimates that differ by approximately 1.65, with the logit coefficients being larger (Long 1997; Long and Freese 2003).[2]

The logit and the probit also share one characteristic with many other probability distributions — they are point-symmetric. Being point-symmetric means many things, not the least of which is that the graph passes through the point (0, 0.50); that is, when the linear combination of the covariates ($\beta'\mathrm{x}$) is zero, then the probability of the event occurring is 50 percent. It also means that the probability of a failure at $\beta'\mathrm{x}$ is equal to the probability of a success at $-\beta'\mathrm{x}$. Furthermore, the rate of change in a success

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[1]To say that the logit is "fat in the tails," as is often done, is to imply that Paris Hilton is also fat in the tail.

[2]In experience, this ratio tends to be closer to 1.70 (Long and Freese 2003).

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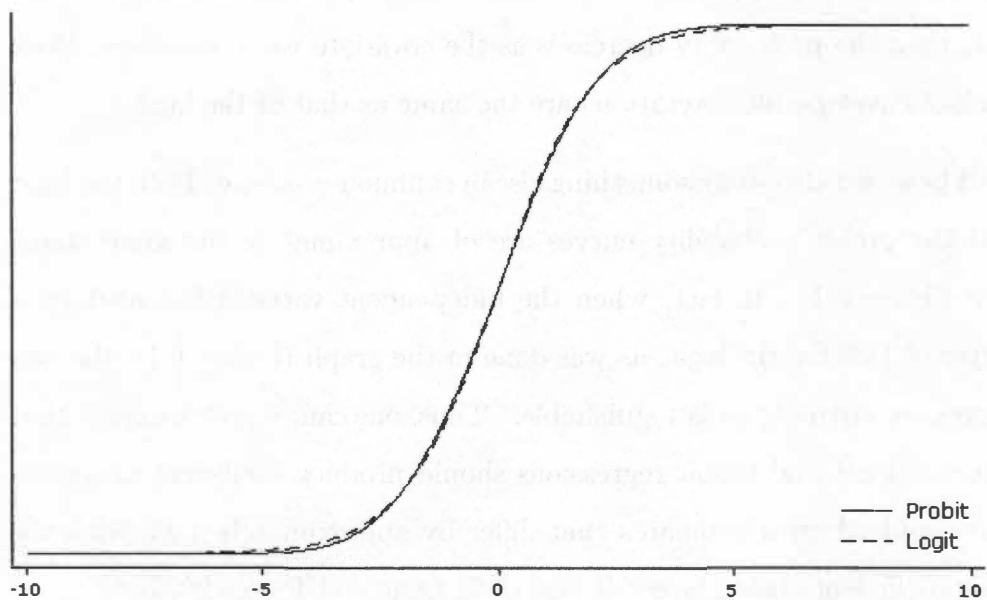
Figure 6.1: Comparison plot of the logit curve vs. the probit curve.
Note: The horizontal scale for the logit curve is diminished by a factor of 1.65 to emphasize the similarities between the two curves.

(or a failure) is also symmetric. Thus, when the researcher fits the data with a logit or a probit link function, they are assuming that the effects of the covariates are symmetric about the $\lambda = 0.50$ mark, whether or not the data warrant such assumptions. If one wishes to model data in which successes or failure are comparatively infrequent, symmetric distributions must be avoided. This is as true for the logit and probit as for the Cauchy and other symmetric distributions — it is a function of the symmetry, not merely the link formula (Long and Freese 2003).

Several asymmetric distributions exist.[3] To more properly model rare (or infrequent) event data, one should employ one of these link functions. While many such link functions exist, few are implemented in current statistical software packages, thus, while many would work, few are accessible to the researcher. The most popular distribution, as based on its implementation level, is the complementary log-log. The complementary log-log link function is $\eta = \ln(-\ln(1 - \mu))$, where ln is the natural logarithm function and μ is the expected value of the linear combination of the covariates — as before, $\mu = \beta'x$.

As one can see from the graph (Figure 6.2), the complementary log-log function is asymmetric and does not pass through (0, 0.50) as do the logit and probit functions. In fact, the complementary log-log function produces a higher probability of success later than does either the logit or the probit. As a result, rare and infrequent events are better modeled using the complementary log-log function (King 1998; Long 1997).

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[3]More importantly, some asymmetric link functions are available in the popular statistical packages.
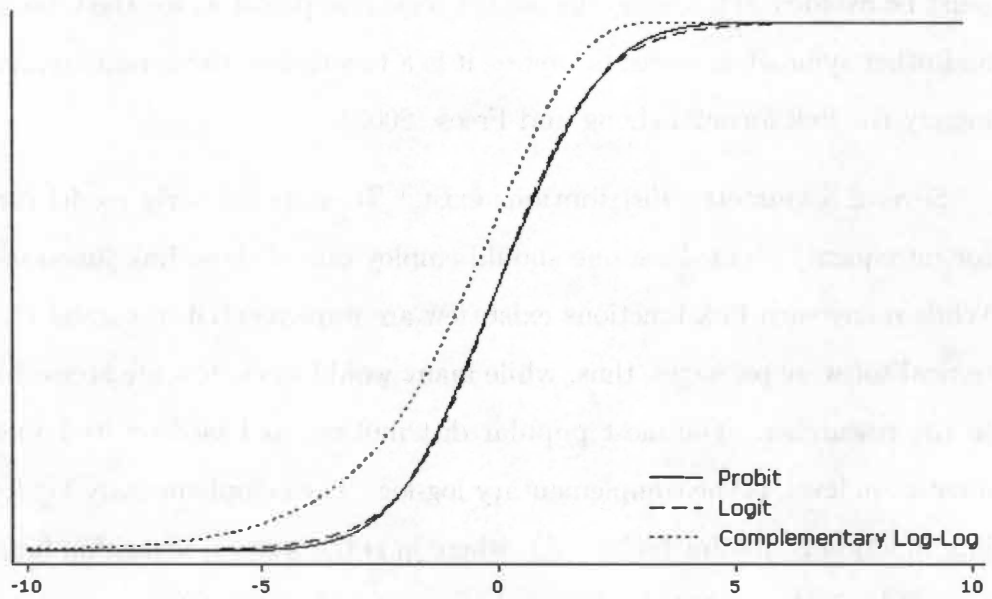
Figure 6.2: Comparison plot of the logit/probit curves vs. the complementary log-log curve.
Note: The horizontal scale for the logit curve is diminished by a factor of 1.65 to emphasize the similarities between the two curves.

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In terms of interpretation, the strains imposed on the researcher using this link function are virtually non-existent. The coefficients are as interpretable in a general sense as are those of the logit and the probit. The raw coefficients have exactly the same interpretation — a positive coefficient implies the probability that the event occurred increases with higher covariate values, and decreases with lower covariate values — the same as for the logit and probit links. The calculation of the probabilities proceeds as before, as well, with only the probability equation changing slightly. Where the probability function for the logit is $\pi = \exp(\beta'x) / (1 + \exp(\beta'x))$ and for the probit is $\pi = \Phi(\beta'x)$, the probability function associated with the complementary log-log is $\pi = 1 - \exp(-\exp(\beta'x))$. In all cases, $\pi = \Pr(y = 1)$ as usual (Hardin and Hilbe 2003).

6.1.1 Population-Averaged or Subject-Specific?

The next issue is the use of a population-averaged model over the more customary subject-specific models. The two primary types of subject-specific models are the fixed effects and the random effects models. The following discussion pulls heavily from Hardin and Hilbe (2003) and Zorn (2001).

The fixed effects model comes in two essentially-equivalent forms — the conditional and the unconditional. The unconditional fixed effects model explicitly models the different intercepts for each of the groups by including an indicator variable for each separate panel in the data set. For large numbers of panels, this results in a drastic reduction in the usable degrees

of freedom. The conditional fixed effects model utilizes a different likelihood equation in the estimation process. The primary advantage is that there is no need to include an indicator variable for each panel, thus the loss in degrees of freedom is substantially less severe than under an unconditional fixed effects model. However, the common drawback to using any fixed effects model is its inability to successfully handle time invariant and rarely-changing covariates. In the case of time invariant covariates, the fixed effects model is unable to provide *any* coefficient estimates. The effects of those covariates are subsumed in the panel indicator variable. In the case of rarely-changing variables, the fixed effects model brutally inflates the estimated standard errors to the point that the coefficient estimates are of little value. As the proposed model has both time invariant and rarely-changing variables, the fixed effects model is an entirely inappropriate choice.

The random effects model does not suffer from the same problems as do the fixed effects models. Both time-invariant and rarely-changing covariates are readily estimated using a random effects model.[4] However, the random effects model has two large drawbacks. First, it assumes that there is no correlation between the included covariates and the random intercept term. Second, as most random effects programs use quadrature to estimate the coefficients, the random effect model is especially sensitive to the number of quadrature points chosen (Hardin and Hilbe 2003). In

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[4]It is more appropriate to call this model a random intercept model, as only the intercept term is allowed to vary across panels. A full random effects model utilizes multi-level modeling (MLM) techniques. The assumptions for MLM are similar to those of the random coefficient model. The drawbacks to a full random effects multi-level model are those of a random coefficient model plus application of those assumptions to the several levels of the model.

the PMT model, the assumption of no correlation between the covariates and the random intercept is questionable. At the very least, it is an unnecessary restriction to force on the model, as other methods are available. Second, the models I estimated using the random effects model were all sensitive to the number of quadrature points chosen. As such, it is hard to put too much faith in the results.

The fixed and the random effects models also share one last common feature. As subject-specific models, they focus more on the panels than on the marginal effects of the covariates.[5] In other words, subject-specific methods answer: "What is the effect of increasing covariate X in state Y on the probability of event T occurring in state Y?" In other words, it compares *within* the state across years. The population-averaged approach examines the effects of the covariates *across* the panels across years. Thus, the question it answers is "What is the effect of increasing covariate X on the probability of event T occurring?" It focuses specifically on the marginal effects of the covariates (Hardin and Hilbe 2003).

Finally, before the statistical results can be discussed, it is necessary to discuss separation and quasi-separation. Complete separation occurs when the model is able to divide the data into two groups that perfectly match with reality. Quasi-complete separation occurs when the line of separation passes through data points belonging to two groups. The third

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[5]There is a further problem using subject-specific models, but only in the way in which they are implemented in current statistical packages. They are estimated using generalized linear models (GLM) as opposed to the more-general generalized estimating equations (GEE). The former make the assumption that each observation is uncorrelated with any other observation in the dataset. The GEE allows for specific modeling of this correlation structure. As a result, the coefficients are not biased (Hardin and Hilbe 2003; Liang and Zeger 1986).

mutually exclusive and exhaustive condition is overlap. Separation, both complete and quasi-complete, causes severe problems with the iterative routines used to maximize the likelihood functions. As all three statistical models use maximum likelihood estimation (MLE) routines, separation, if it exists in the data, would be a problem. There are two principal causes of separation. The first is micronumerosity — small-n datasets. The second is the existence of a perfect predictor variable (or set of variables). The first can be solved by increasing the amount of data available for the analysis. The second is not a problem, per se, but it does constitute an annoyance for estimation (Albert and Anderson 1984; Santner and Duffy 1986).

In this model, and for this data, the group concentration variable exhibited evidence of complete separation. Those groups *in this dataset* that were not regionally concentrated did not resort to terrorism. Whether this finding holds in general or was merely an artifact of the current dataset, only further studies can determine. However, the fact remains that the separation issues must be dealt with. Simply removing the group concentration variable from the model introduces severe specification bias.[6] Keeping it in the model eliminates all chances that the model can be estimated. There are two solutions of which I am aware. The first uses a penalized likelihood correction to the standard binomial GLM score function instead of the traditional likelihood function (Zorn 2005: 157). The second creates a taxonometric structure. The drawback to the first is that the correction is relatively new and not fully supported either in the literature or in the

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[6]It is severe simply because that covariate is known to affect the dependent variable.

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statistical software programs. The drawback to the second is that it produces a more complex-looking function. In the spirit of do-what-you-can, I use the second method.

Beyond the issue of separation, there is the previously-discussed issue of temporally truncated variables. Because of the different time spans available in the data, three models had to be run for each link transformation. The three models corresponded to 1946–2000, when the first seven variables could be used; 1950–2000, when percent urban could be added; and 1960–2000, when unemployment rate and gross domestic product per capita could be added. One interesting point is that, while none of the last three variables were significant in any of the models, their inclusion did make the models themselves more significant and better predictive. Thus, the three variables remained in the final model.

Contemporaneous correlation, where events in one group affect events in a separate group, is often a concern when dealing with cross-sectional data. There are two ways in which this could occur in these models. First, the correlation may be between kindred ethnic groups; that is, a single ethnic group exists as a minority at risk in two neighboring states. In this research, because of the small number of cross-border kindred ethnic groups involved (only the Basques fit into this group), and because the sole kindred group used terror in one state, but not the other, there is no reason to test for it.

The second aspect centers on the state. Is there a correlation between the groups within a state? Again, within this limited dataset, the answer apparently is no. The only state that had two different ethnic groups use

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terrorism was France, and there was no reported connection between the two ethnic groups. In fact, there was much more connection between the Spanish Basques and the Provisional IRA, especially in terms of exchanging *matériel* and funds. Because of these two reasons, I concluded that contemporaneous correlation is also not an issue.

6.2 The Initial Analysis

Discussing the results from each of the three statistical models separately would be redundant, as conclusions from each are similar. However, the differences among the tables provide an interesting insight into the data structures themselves. While the three links — logit, probit, and complementary log-log — usually produce similar results, the subtle differences among these functions is sufficient to warrant an in-depth discussion. As such, I discuss each of the models presently.

6.2.1 The Logit Regression Model

Table 6.1 presents the results of the logit regression. The three models run reflect the results of incomplete data. The first seven variables were available from 1946 until 2000, whereas the other variables had a reduced availability. Specifically, the urban percent was available only from 1950 onward, and the unemployment rate and the GDP per capita were available from 1960. As a rule, this does not seem to have altered the significance of the variables. In other words, with one exception, the added variables seem

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Table 6.1: The results of the logit regression for the three temporal models examined here.

	1946–2000	1950–2000	1960–2000
Previous use of terror	5.439***	5.509***	5.909***
	(1.489)	(1.609)	(1.115)
Percent of youth in state	1.825***	1.875***	2.075***
	(0.533)	(0.537)	(0.514)
Negative economic differentials	2.155***	2.092***	2.583***
	(0.531)	(0.507)	(0.530)
Ethnic differences	−1.918***	−1.743*	−1.349**
	(0.567)	(0.750)	(0.494)
Level of democracy	−1.400*	−1.205#	1.130***
	(0.693)	(0.746)	(0.293)
Change in level of democracy	0.300*	0.270*	0.411
	(0.134)	(0.127)	(0.285)
Total trade for state	3.92	2.76	4.43*
	(2.51)	(1.91)	(2.14)
Percent urban		0.024	−0.016
		(0.081)	(0.082)
Change in unemployment rate			−0.126
			(0.246)
Change in GDP per capita			−0.001
			(0.001)
Intercept	−16.447*	−21.089	−46.142***
	(8.370)	(15.835)	(12.444)
Wald χ^2 Statistic (G-2)	61.38***	33.43***	2028.43***
Number of Groups (G)	7	7	10
Number of Observations (N)	315	301	342
ROC: Area Under Curve	0.942	0.950	0.983

Notes: Assuming that the group is geographically concentrated and that the state is a democracy. Because of changing political factors, French groups were eliminated from the first two and the Spanish groups from all temporal periods. Autoregressive AR1 correlation structure used in each model. Total trade for the state is scaled by a factor of 10^{-12}. Standard errors are robust, grouped on ethnonational group. Significance notation: # $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ for two-tailed tests.

to either be describing a different dimension of risk or they are completely uncorrelated with an increased risk.

Without doubt, previous use of terror is the most important factor in predicting future use of terror. For those groups that previously used terrorism, they had more than a 230-time increase in the probability of using terrorism again. This includes not only a year-to-year use of terror; it includes a distant past use of terror, such as in the cases of the Basques and the Irish. This finding underscores the importance of stopping terrorism before it begins.

The percent of youth in the state is also highly indicative of the risk of the group resorting to terrorism. Increasing the percentage of youth by one percentage point increases the risk of terrorism by 600%. In all three time periods, this held true. Thus, a state with a base terrorism rate, based on the other factors, of 1% will have a 6% chance of experiencing terrorism if there is an increase in adolescent population by just one percent.

The level of economic differentials between the ethnic group and the rest of the state's population is also a strong indicator of increased risk of a terrorist attack. Increasing those economic differentials by one level increases the risk of a terrorist attack by a factor of more than eight.

The effects of ethnic differences do not correspond to the hypothesis put forth. According to this model, increasing the ethnic differences actually reduces the risk of a terrorist attack. This conflicts with common sense. I will discuss possible reasons for this when I discuss the complementary log-log model, but it suffices here to mention that the MAR project constructed

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this variable as a summary measure of four other variables — language, race, customs, and beliefs (religion). Thus, one would hope that breaking this summary measure into its four component measures would more clearly show the effects in each of those aspects of ethnicity.

Both the level and the change in level of democracy in the state behaved differently depending on which variables were included in the analysis. For the analysis including the fewest number of variables, both were statistically significant. In the other two time periods, one or the other — but not both — were statistically significant.[7] In the last two columns of Table 6.1, we can see that the p-value for the non-significant level of democracy (1950–2000) is 0.094. The p-value of the change in democracy level (1960–2000) is 0.149.

The more interesting problem is the change in sign of the change in democracy-level variable. In the first two time periods, the sign was negative — a higher level of democracy in the state produces a lower probability of a terrorist attack. In the last time period, the sign was positive — a higher level of democracy in the state produces a higher probability of a terrorist attack. At this point, I will only draw attention to this finding. As with the counter-intuitive effects of ethnic differentials, I will postpone further discussion of this result until the complementary log-log model. Suffice it to say, this is one of those "That's funny..." moments.

In only the last model (1960–2000) is the level of trade, an indicator variable for globalization, statistically significant. This is not too surprising

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[7]The issue of multicollinearity is moot. The highest variance inflation factor (VIF) for the model was 4.22 — far from worrying.

as the level of globalization and its effects were not great until the 1970s (see Figure 5.1). However, the direction of the relationship does support the hypothesis that globalization does contribute to the level of terrorism in the state. The shape of the function is the key. Replacing the exponential rate of increase with a constant or with a linearly increasing function does not produce a statistically significant result.

The effects of the remaining three variables, percent urban, change in unemployment rate, and change in GDP per capita are not statistically significant.[8] However, later in this research I alter the change in GDP per capita variable to test for the effects of recessions on the probability of a terrorist strike and come to a finding already known in the extant literature — to a point (Blomberg, Hess, and Weerapana 2004; Bueno de Mesquita 2005c).

The Wald statistics for the three models indicate high levels of significance for the models. But, how good is the model? Using Hosmer and Lemeshow's (2000) criteria for the area under the ROC curve, all three models produce excellent discrimination between terrorist groups and non-terrorist groups.[9] Thus, not only is the model statistically significant, but it describes the data very effectively.

[8]I also included the unemployment rate and the GDP per capita in the model, but these were not statistically significant either.

[9]I later discuss the importance of the area under the ROC curve and its application as a measure of model goodness of fit. I postpone this discussion until after each model is discussed in detail.

6.2.2 The Probit Regression Model

The results of the probit model (Table 6.2) are extremely similar to those of the logit model. This should not surprise us in the least, as there is little difference between the logit and the probit graphs under the correct transformations (see Figure 6.1). In fact, the only noticeable difference between the logit and the probit models is the statistical significance of the globalization indicator variable. This is just a reflection of the general inapplicability of these two symmetric regression models in dealing with these data and these variables.

All three models are statistically significant when using probit regression, as was the case with the logit regression. The areas under the ROC curve cannot differentiate between these two regression models either, as the differences are well within the associated standard errors.

6.2.3 The Complementary Log-Log Regression Model

The third statistical regression model I use is the complementary log-log model. In this case, I prefer the complementary log-log model as it is not symmetric; that is, it better describes and models rare events, such as terrorism. The results of the complementary log-log regression are similar to the other two binary dependent variable regression run. However, there are some significant differences that I would like to discuss here. The first is the change in the statistical significance of the level of democracy in the state. The second is the change in significance in the effects of changing

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Table 6.2: The results of the probit regression for the three temporal models examined here.

	1946–2000	1950–2000	1960–2000
Previous use of terror	2.464***	2.470***	2.891***
	(0.696)	(0.696)	(0.611)
Percent of youth in state	0.855***	0.884***	1.022***
	(0.242)	(0.255)	(0.238)
Negative economic differentials	0.998***	1.084***	1.348***
	(0.182)	(0.229)	(0.276)
Ethnic differences	−0.918***	−0.914**	−0.685***
	(0.240)	(0.295)	(0.211)
Level of democracy	−0.601*	−0.540#	0.645***
	(0.265)	(0.306)	(0.183)
Change in level of democracy	0.130**	0.121*	0.187
	(0.050)	(0.049)	(0.122)
Total trade for state	1.60	1.26	1.99
	(1.26)	(1.00)	(1.32)
Percent urban		0.001	−0.020
		(0.029)	(0.028)
Change in unemployment rate			−0.110
			(0.102)
Change in GDP per capita			−0.0006
			(0.0004)
Intercept	−8.089*	−9.145	−22.606***
	(3.973)	(6.629)	(5.002)
Wald χ^2 Statistic (G-2)	354.84***	33.83***	6060.77***
Number of Groups (G)	7	7	10
Number of Observations (N)	315	301	342
ROC: Area Under Curve	0.946	0.947	0.983

Notes: Assuming that the group is geographically concentrated and that the state is a democracy. Because of changing political factors, French groups were eliminated from the first two and the Spanish groups from all temporal periods. Autoregressive AR1 correlation structure used in each model. Total trade for the state is scaled by a factor of 10^{-12}. Standard errors are robust, grouped on ethnonational group. Significance notation: # $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ for two-tailed tests.

that level of democracy. The third is the effect of globalization on the probability of a group using terrorism (Table 6.3).

In the previous two statistical models, the effects of the level of democracy changed in statistical significance based on the temporal domain examined. In the complementary log-log model, such is not the case. In all three time periods, increasing the level of democracy in the state increases the probability of a terrorist attack. The level of democracy in the state follows a pattern similar to the logit and the probit models — the relationship is negative in the first two time periods, and positive in the last. Here, however, the relationship is not statistically significant in the first two time periods. This is due mainly to the reduced time period; that is, the effect of democracy is strongest in the 1960–2000 period than in the longer time periods. The inclusion of the three additional variables alters neither the statistical significance nor the directional effect of the level of democracy on the probability of a group using terrorism.

The second interesting point in the complementary log-log models is that the effect of changing the level of democracy is more consistent across the time periods. In the logit and the probit models, the statistical significance depended on the time period examined. In the complementary log-log model, the effects changing the level of democracy do not change in either significance nor in direction — they are statistically significant and are positive. A state with a higher level of democracy will have a higher probability of being the home of a terrorist group. Thus, explaining the change in significance is no longer needed. While the effects of including or not including the French groups may have been seen in the logit and

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Table 6.3: The results of the complementary log-log regression for the three temporal models examined here.

	1946–2000	1950–2000	1960–2000
Previous use of terror	4.499***	4.633***	4.518***
	(1.113)	(1.334)	(0.735)
Percent of youth in state	1.480***	1.520***	1.526***
	(0.363)	(0.358)	(0.277)
Negative economic differentials	1.790***	1.595***	1.840***
	(0.383)	(0.424)	(0.266)
Ethnic differences	−1.519***	−1.292**	−0.934***
	(0.366)	(0.472)	(0.294)
Level of democracy	−0.195	−0.091	0.930***
	(0.447)	(0.453)	(0.179)
Change in level of democracy	0.094***	0.097**	0.502**
	(0.021)	(0.033)	(0.171)
Total trade for state	3.57*	2.40*	3.87***
	(1.68)	(1.18)	(1.02)
Percent urban		0.035	0.004
		(0.075)	(0.052)
Change in unemployment rate			−0.037
			(0.140)
Change in GDP per capita			−0.001
			(0.001)
Intercept	−23.489***	−27.989*	−37.112***
	(8.560)	(12.817)	(7.626)
Wald χ^2 Statistic (G-2)	5524.20***	72.87***	6386.82***
Number of Groups (G)	7	7	10
Number of Observations (N)	315	301	342
ROC: Area Under Curve	0.961	0.972	0.981

Notes: Assuming that the group is geographically concentrated and that the state is a democracy. Because of changing political factors, French groups were eliminated from the first two and the Spanish groups from all temporal periods. Autoregressive AR1 correlation structure used in each model. Total trade for the state is scaled by a factor of 10^{-12}. Standard errors are robust, grouped on ethnonational group. Significance notation: # $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ for two-tailed tests.

probit models, there appears to be no difference in the complementary log-log model. In other words, the three French groups, the Corsicans, the Basques, and the Bretons, appear to behave in a manner consistent with the other Western European ethnic groups.

A third interesting change in this set of models is the constancy in the statistical significance of the effects of globalization. In both the logit and the probit models, either the significance of the effects of globalization changed based on the time period examined (logit) or the effects were not statistically significant (probit). In the complementary log-log model, globalization is a statistically significant factor in predicting the move to terrorism by the group in each of the time periods. In fact, in the 1960–2000 period, it is highly significant ($p \leq 0.001$).

Table 6.4 compares the three statistical models with all variables (i.e. from 1960–2000). As only the 1960–2000 models include all of the variables, it suffers least from model misspecification. Thus, of the three sets, it best reflects the underlying processes governing the ethnonational terrorism factors. It also allows a comparison across statistical models more easily. From this comparison, we can see that the complementary log-log model best describes the data. The Wald statistic is higher for the complementary log-log model than for the other two.

In addition, the areas under the ROC curve for the three models are not statistically different from one another. Moreover, as an added bonus, more of the variables of interest are statistically significant in the complementary log-log model than in either of the other two. However, for five of the variables, it makes little difference to which statistical model we refer, as

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Table 6.4: A summary of the results of the logit, probit, and complementary log-log regression for the 1960–2000 time period examined here.

	Logit	Probit	Cloglog
Previous use of terror	5.909***	2.891***	4.518***
	(1.115)	(0.611)	(0.735)
Percent of youth in state	2.075***	1.022***	1.526***
	(0.514)	(0.238)	(0.277)
Negative economic differentials	2.583***	1.348***	1.840***
	(0.530)	(0.276)	(0.266)
Ethnic differences	-1.349**	-0.685***	-0.934***
	(0.494)	(0.211)	(0.294)
Level of democracy	1.130***	0.654***	0.930***
	(0.293)	(0.183)	(0.179)
Change in level of democracy	0.411	0.187	0.502**
	(0.285)	(0.122)	(0.171)
Total trade for state	4.43*	1.99	3.87***
	(2.14)	(1.32)	(1.02)
Percent urban	-0.016	-0.020	0.004
	(0.082)	(0.028)	(0.052)
Change in unemployment rate	-0.126	-0.110	-0.037
	(0.246)	(0.102)	(0.140)
Change in GDP per capita	-0.001	-0.0006	-0.001
	(0.001)	(0.0004)	(0.001)
Intercept	-46.142***	-22.606***	-37.112***
	(12.444)	(5.002)	(7.626)
Wald χ^2 Statistic (G-2)	2028.43***	6060.77***	6386.82***
ROC: Area Under Curve	0.983	0.983	0.981

Notes: Assuming that the group is geographically concentrated and that the state is a democracy. Because of changing political factors, French groups were eliminated from the first two and the Spanish groups from all temporal periods. Autoregressive AR1 correlation structure used in each model. Total trade for the state is scaled by a factor of 10^{-12}. Standard errors are robust, grouped on ethnonational group. Significance notation: # $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ for two-tailed tests.

they all express the same results. As such, the remainder of this section deals exclusively with the complementary log-log model. Specifically, the next section more-fully presents the statistical background required to have a better understanding of the results.

6.3 Statistical Backfill

There are two aspects to whether or not a model is an appropriate description of the data — significance and fit. Model significance can be measured using the Wald test. The complementary log-log model has a Wald test statistic of $\chi^2(10) = 2028.43$, which is significant at any reasonable level. Other tests of model significance exist. The Bland and Altman limits-of-agreement test the predicted and the actual measures. The limits-of-agreement test gives an average difference of -0.000, with a standard deviation of 0.204. As the average difference is not significantly different from zero, the model is significant (Bland and Altman 1986).[10]

The second aspect to determining the appropriateness of a model is the goodness of fit of that model. As with model significance, there are several ways to measure goodness of fit. As discussed in the previous chapter, the

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[10]However, another measure of model significance does not agree with these two. The Lin concordance correlation coefficient both measures the amount of correlation between the predicted and the actual values and the amount of clustering of the data. The statistic, ρ_c, is then compared to 1.00 using a standard z-test. For this model, the coefficient is $\rho_c = 0.881$ (s.e. = 0.012; p $\leq$ 0.0005). Thus, as the two values are statistically distinct, the model does not fit the data well. However, the value to testing of the Lin concordance correlation coefficient measure is muted by the fact that Lin proposed it as a comparison of continuous data (Lin 1989). The terrorism variable is dichotomous, thus the measure of data clustering is incorrect. As of now, there is no correction for dichotomous data of which I am aware.

most appropriate way for the answers this research is trying to determine is the receiver operating characteristic curve.

A graphical representation of an analytic for the suitability of the proposed model is the receiver operating characteristic curve (Figure 6.3). Receiver operating characteristic (ROC) curves graph the relative proportion of true positives (sensitivity) against those of false positives ($1 -$ specificity). Each point on the curve corresponds to a different cut point (λ). As mentioned earlier, accuracy tests tend to select a cut point of λ $= 0.50$, however there is usually no *a priori* reason for that selection. The final choice of a cut point is a function of the relative costs of doing something when you should not vs. not doing something when you should all moderated by the actual prevalence of the event. Equation 6.1 shows the formula for calculating the optimal cut point, where d is the prevalence of terrorism, and the costs are for false positives (C_{FP}), true negatives (C_{TN}), false negatives (C_{FN}), and true positives (C_{TP}). The calculation produces the slope of the ROC curve at that optimal cut point. In general, the less expensive it is to do something and the more expensive it is to have the 'disease', the greater the optimal slope of the ROC curve and, thus, the lower the optimal cut point.

$$\frac{\partial ROC}{\partial FPF} = \left(\frac{1-d}{d}\right)\left(\frac{C_{FP} - C_{TN}}{C_{FN} - C_{TP}}\right) \tag{6.1}$$

However, even without calculating the optimal cut point, the ROC curve provides a convenient measure of fit for the model tested. The area under the ROC curve is the probability that a group resorting to terror
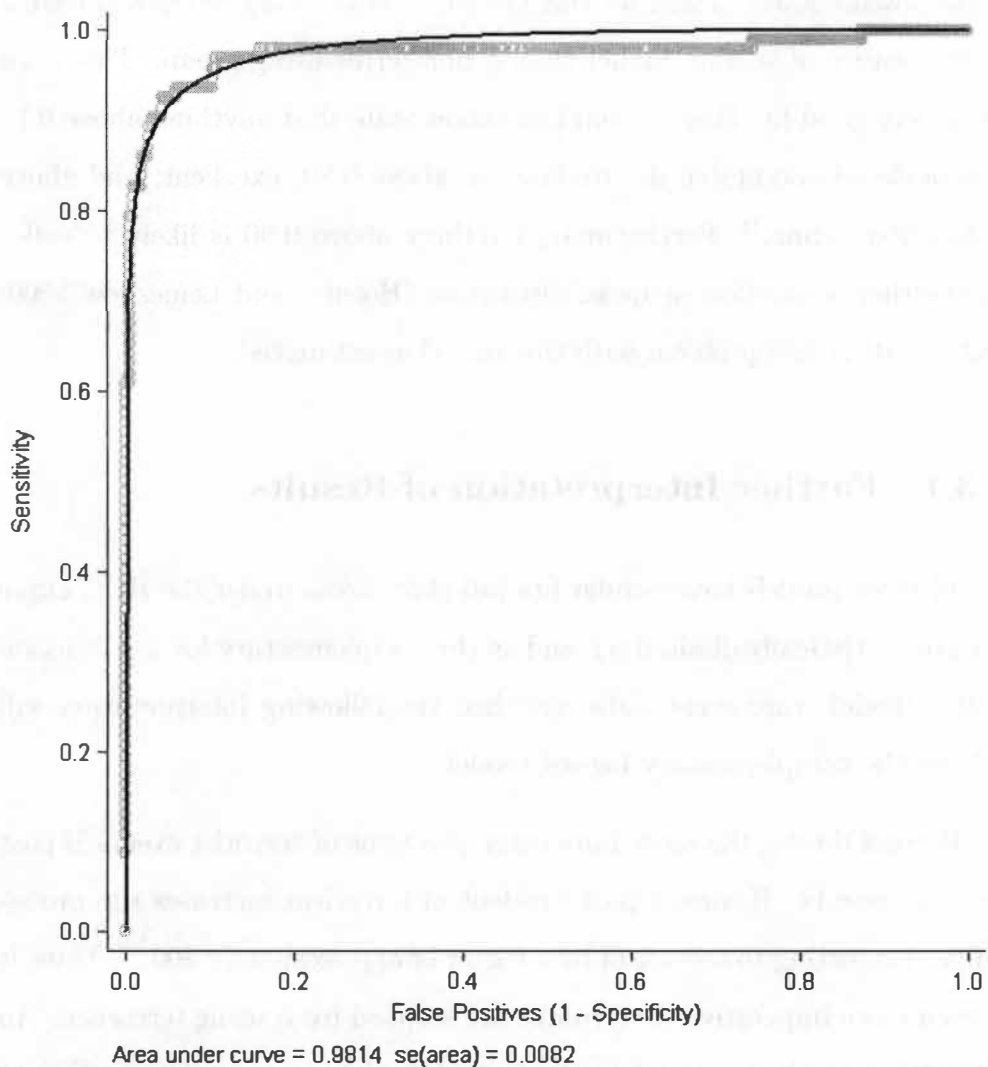
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Figure 6.3: Parametric and non-parametric receiver operating characteristic curve for the full complementary log-log model.
Notes: The parametric curve (solid) assumes binormal distribution of the specificity and the sensitivity measures. The non-parametric curve (thick) makes no such assumption.

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will score higher on the model than a group not resorting to terrorism (Obuchowski 2003). Thus, for this model, a terror-using group will have a 98.1% chance of scoring higher than a non-terror-using group. This is an extremely good fit. Hosmer and Lemeshow state that anything above 0.70 is considered acceptable discrimination; above 0.80, excellent; and above 0.90, outstanding.[11] Furthermore, anything above 0.90 is likely to suffer from either separation or quasi-separation (Hosmer and Lemeshow 2000: 162). Neither is a problem with this model as estimated.

6.3.1   Further Interpretation of Results

As all three models have similar fits (all three areas under the ROC curve are not statistically dissimilar), and as the complementary log-log function better models rare event data like this, the following interpretation will rely on the complementary log-log model.

Beyond doubt, the more important predictor of terrorist events is past terrorist events. Having a past incident of terrorism increases the probability of resorting to terrorism by a factor of approximately 800.[12] Thus, it is even more imperative that groups are stopped from using terrorism. An interesting result occurs when the partial model is run.[13] The coefficient

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[11]Moreover, as a point of reference, if the area under the ROC curve is 0.50, there is absolutely no discrimination. In other words, one might as well flip a coin as run the test.

[12]This is the ratio of the probability a group will use terrorism if it has used it in the past (0.2336) to the probability a group will use terrorism if it has not (0.0029), holding all other variables at their means.

[13]The full models use all data records until 2000, whereas the partial model only uses the records until the group initiates terrorism.

of the previous use of terror variable for the full model is 4.518 (see Table 6.4), whereas for the partial model it is 5.693 (s.e. $= 6.729$; $p = 0.398$). The coefficient lost statistical significance. Why? Two possible reasons: First, the cost reduction attained when terror was used in the distant past is not as great as the cost reduction within the same campaign. Thus, the increase in action pressure due to a harkening to the past is not statistically significant at this level. The second reason may simply be the small number of groups examined who had a past history of terrorism. Only two groups have a history of organized terror campaigns prior to the Second World War — the Irish and the Spanish Basques.

Thus, the importance of the previous use of terrorism variable may be due less to the historical factors and more to the ease of continued terror campaigns. In other words, the costs of terrorism are significantly lower when it was last used a month ago than when it was last used a century ago.

Several other factors correlate quite highly with terrorism use; however, not all are in the direction predicted by the hypotheses. A higher percentage of youth in the state does correlate with an increase in terror activity. Increasing the percentage of youth in a state by 1% results in an increase in terror probability by nearly a factor of five.[14] Thus, the assertion that the youth tend to be the source of both the terror impetus and the terror population is definitely supported by the data.

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[14]Holding all other variables at their means, changing the youth percent from 15% to 16% increases the probability of terror use from 0.0019 to 0.0089. This corresponds to a ratio of 4.63.

Unemployment, however, is not a satisfactory predictor variable. In none of the three statistical models above did an increase in unemployment rate correspond to an increase in terrorism probability. It is interesting to note that the unemployment rate, itself, is a statistically significant predictor (b = 0.179; p = 0.065). This finding, in conjunction with the results concerning the effects of a changing unemployment rate both support the hypothesis, however only in a weak sense. Unemployment does have an effect on terrorism, but this data and these models are unable to fully expose that relationship. It appears as though higher unemployment rates are correlated with higher levels of terrorism. It also appears that increasing unemployment rates reinforce that correlation (albeit weakly). It would be interesting to discover if the relationship is strengthened with the inclusion of more groups and regions or if it is just an inherently weak relationship.

As cities are sources of economic differences, despair, poverty, recruits, and targets, the level of urbanization in the state should also be correlated with terrorism activity. According to the models, *ceteris paribus*, it is not. A separate model run showed that increases in urbanization are correlated with increased terror probability, but only at the p = 0.17 level. This corresponds to acceptance at the $\alpha = 0.10$ level for a one-tailed test.[15] Why did this variable not achieve statistical significance as the model suggests? First, the other factors explaining why higher urban rates should produce higher levels of terrorism are already present in the model. Second, it is important to note that the sign of the coefficient is in the predicted

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[15] While not customary, such levels of significance are being used in top journals (see, for example, Clark and Nordstrom 2005).

direction in the complementary log-log model, the coefficient merely failed to achieve significance. Third, the general trend in the world is toward greater levels of urbanization. Thus, the lack of statistical significance may simply be due to high levels of correlation between it and another naturally-increasing variable. In short, this could just simply be a small-n problem (King, Keohane, and Verba 1994).

Moving from individual-level to group-level factors, the hypothesis regarding economic differentials was strongly supported. A greater level of economic differential between the ethnic group and the state produces a higher chance of that group resorting to terrorism (Figure 6.4). Unfortunately, because of the region chosen, I could investigate neither the effects of economic advantages nor the effects of losing economic advantages. Furthermore, because none of the states changed the ethnic group in power during the period of this study, I also could not investigate the effects of increasing negative economic differentials on the probability of resorting to terrorism. However, the PMT suggests that positive economic differentials should have a pacifying effect, while both the loss of advantages and the increase of disadvantages should result in a higher probability of a group becoming terrorist.

Concluding the group-level hypotheses, the data did not support the contention that greater ethnic differences should result in higher chances of terrorism. In fact, the results suggest that greater levels of ethnic differences result in a reduction in probability by a factor of almost four.[16]

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[16]The coefficient on the ethnic differentials variable corresponds to a probability of 0.2594, which is approximately 1/3.854, hence the pacifying effect.
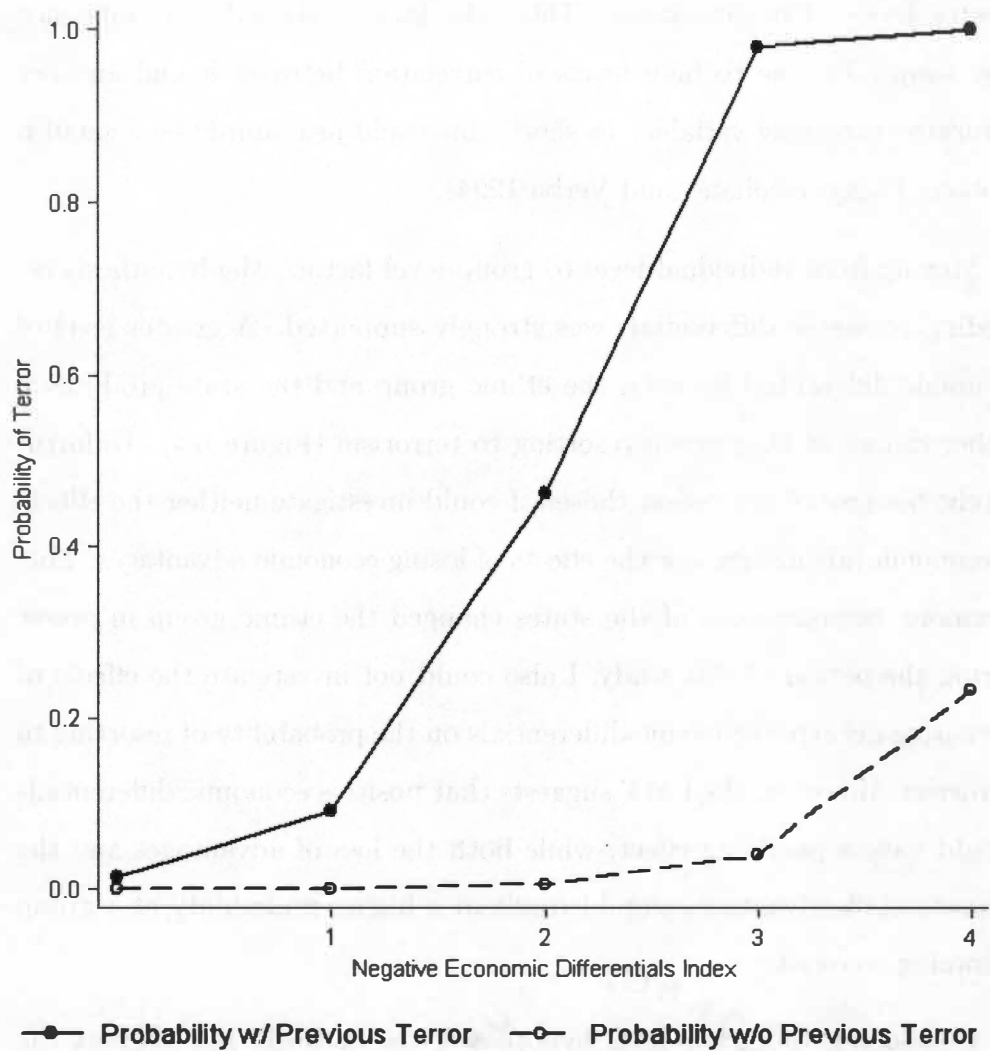
Figure 6.4: The results of changing the level of ethnic differentials on terror probability.

Table 6.5: Results of replacing the ethnic differentials variable with its component measures.

	Coefficient	Std Err	z-score
Language	1.467	0.223	6.57***
Customs	−1.610	1.392	−1.16
Beliefs	0.951	0.760	1.25

Notes: While race is a component of the ethnic differentials index, it did not vary across the data, thus it had to be dropped from consideration. The coefficients are logit coefficients. The standard errors are robust standard errors. The correlation structure is autoregressive-1.

What is it about ethnic separation that produces a retardant effect on terrorism? Closer examination of the different components of ethnic separateness produces some interesting conclusions (Table 6.5). Only one of the components achieved statistical significance — language differences. A different language spoken by the ethnic group results in a seven-fold increase in the probability that group will use terror. While the effect of religion is obvious in the actions of the IRA, religion is not a significant predictor of terrorism activity — at least for ethnonational groups in this sample.

Religion was important in a few of the cases. The Troubles began shortly after the civil rights march of the Roman Catholics was violently rebuffed by Protestant civilians who wanted to keep the status quo. Also, it is also evident that religion and language both played a role in causing the Jurassiens to fight to separate from Canton Berne. The Jurassiens were a French-speaking, Roman Catholic group whose home region was annexed to Canton Berne, a German-speaking, Protestant canton. However, the

problems of religion do not extend to the other groups under consideration. The South Tyroleans are of the same religion as Italy, as are the Sardinians. The Basques and Catalans are both as Catholic as Spain. Scotland differs from Great Britain only in Presbyterian vs. Anglican sects, while Corsica and Brittany match France's religion.

Next, as expected from the theory and from the literature, the level of democracy is positively correlated with the probability of a group using terrorism. Before the models above were calculated, a preliminary model was run which included a variable signifying if the state was democratic. The result was that the data did not support the contention that a democratic state has a lower chance of spawning terror groups ($b = -2.50$; $p = 0.194$). Furthermore, in the original model, the level of democracy was not statistically significant ($b = 0.101$; $p = 0.547$), although increasing levels were correlated with higher probabilities ($b = 0.382$; $p = 0.007$).[17] In focusing on only the democracies, it became possible to determine if the level of democracy was a factor. It was (Figure 6.5). The Polity IV democracy scale runs from 0 to 10. A one unit increase in that scale corresponds to a three-fold increase in terrorism probability according to the model (although increases, per se, are only statistically significant in the complementary log-log model).

These conclusions fit well with the PMT and with conclusions made by Crenshaw (1981), Ross (1993), and Sederberg (1989). A democratic state may reduce the action pressure, but a more democratic state will also be

[17]Results similar to the reported model were found for the remainder of the variables, as well, except that percent urban almost attained significance ($b = 0.092$; $p = 0.053$).
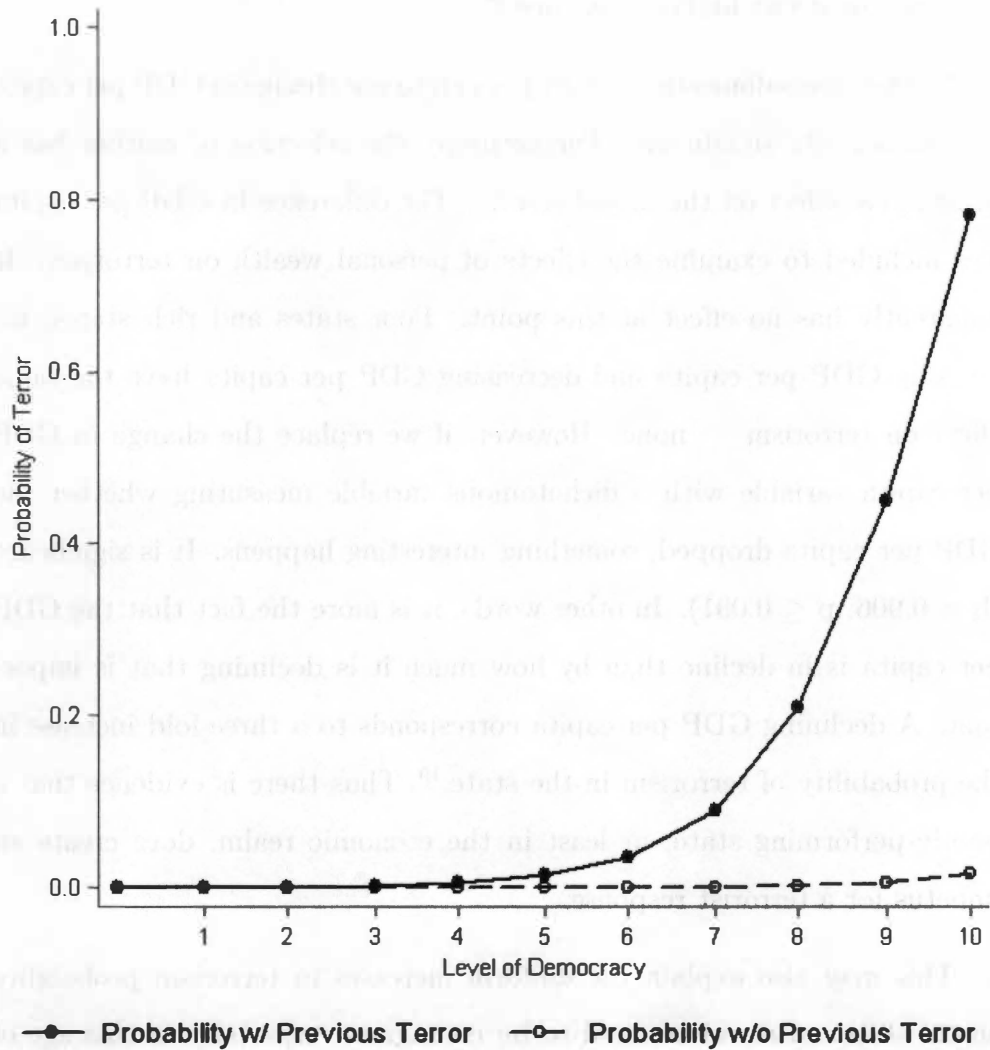
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Figure 6.5: The results of different levels of democracy in the state on terror probability.

unable to quash terrorist groups once they form. It would be interesting to determine if actual increases in democracy are correlated with increased terrorism or if just higher levels are.[18]

Neither gross domestic product per capita nor change in GDP per capita are statistically significant. Furthermore, the selection of neither has a substantive effect on the model results. The difference in GDP per capita was included to examine the effects of personal wealth on terrorism. It apparently has no effect at this point. Poor states and rich states, increasing GDP per capita and decreasing GDP per capita have the same effect on terrorism — none. However, if we replace the change in GDP per capita variable with a dichotomous variable measuring whether the GDP per capita dropped, something interesting happens. It is significant ($b = 0.906$; $p \leq 0.001$). In other words, it is more the fact that the GDP per capita is in decline than by how much it is declining that is important. A declining GDP per capita corresponds to a three-fold increase in the probability of terrorism in the state.[19] Thus there is evidence that a poorly-performing state, at least in the economic realm, does create an impetus for a terrorist response.

This may also explain the uniform increases in terrorism probability across states. Recessions tend to be contagious, especially in this age of globalism. Thus, a recession in one state will shortly increase the probability of a terrorist group acting in a different state. This result may explain

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[18] Alas, this must await a larger and more heterogeneous dataset for testing. The Western European dataset does not include a sufficient number of cases where the level of democracy in the state changes.

[19] A similar result holds if a 1% increase is used as the cutoff, although not for a 2% increase.

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much of Midlarsky, Crenshaw, and Yoshida's discovery of the "contagion of international terrorism" (1980).

The final hypothesis dealt with globalism. As no reliable direct measures of globalism were available, I used total interstate trade as a proxy. The coefficient on the total trade variable was statistically significant. Furthermore, it was in the correct direction. Thus, the model literally supports the contention that a higher level of trade in the state results in a greater probability of a group using terrorism. The exponential shape of the trade curve is important in this analysis. Simply using the year or the log of the total trade as a proxy, both of which are linear or near linear, would not have mimicked the assumed shape of the globalization curve. In fact, replacing total trade with either the year or the log of the total trade resulted in a coefficient and a model that was less significant. Thus, while total trade may not be an actual measure of globalization, it does have the necessary properties. Thus, if we do assume trade is an appropriate proxy for globalization, we can conclude that globalization does positively (or negatively, depending on your point of view) affect probabilities for outbreaks of terrorism.

Thus, as a whole, the model does appear to have performed quite well with this dataset. However, as is always the case, including more groups will make the final analysis more accurate and more reflective of reality.

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6.4 Event History Models

Before I move on to investigating the effects of political shifts on terrorist groups, I would like to determine if event history analysis would work with the data as it now stands. The first thing to do is examine the baseline hazard to determine if it fits one of the available distributions. The baseline hazard is a function of time and not of the groups. Thus, it is the hazard the each group feels as a result of existing. All other hazards that depend on group and state factors add to this baseline rate. Using the Nelson–Aalen cumulative hazard estimator and smoothing it using the Epanechinikov–2 smoothing kernel, we see the shape of the underlying hazard function from 1960 until 1987 (Figure 6.6). Using the Epanechinikov–2 smoothing function allowed the curve to better reflect the data, while at the same time reducing major inter-year fluctuations (Cleves, Gould, and Gutierrez 2004; Hosmer and Lemeshow 1999).

The smoothed hazard function follows no known distributional form. Further work using survival time analysis must re-parameterize the times when the group enters risk. That is, simply using the end of World War II as an entry point for each of the groups does not produce acceptable results. One may suggest that the entry event should be the year the group lost independence. This may work for groups losing their independence in the last century like the South Tyroleans or the Sardinians, but most of the ethnonations in Western Europe lost their independence centuries in the past. The Irish lost it in the twelfth century with the violent influx of the English; the Scots in 1603, when James VI of Scotland united the two
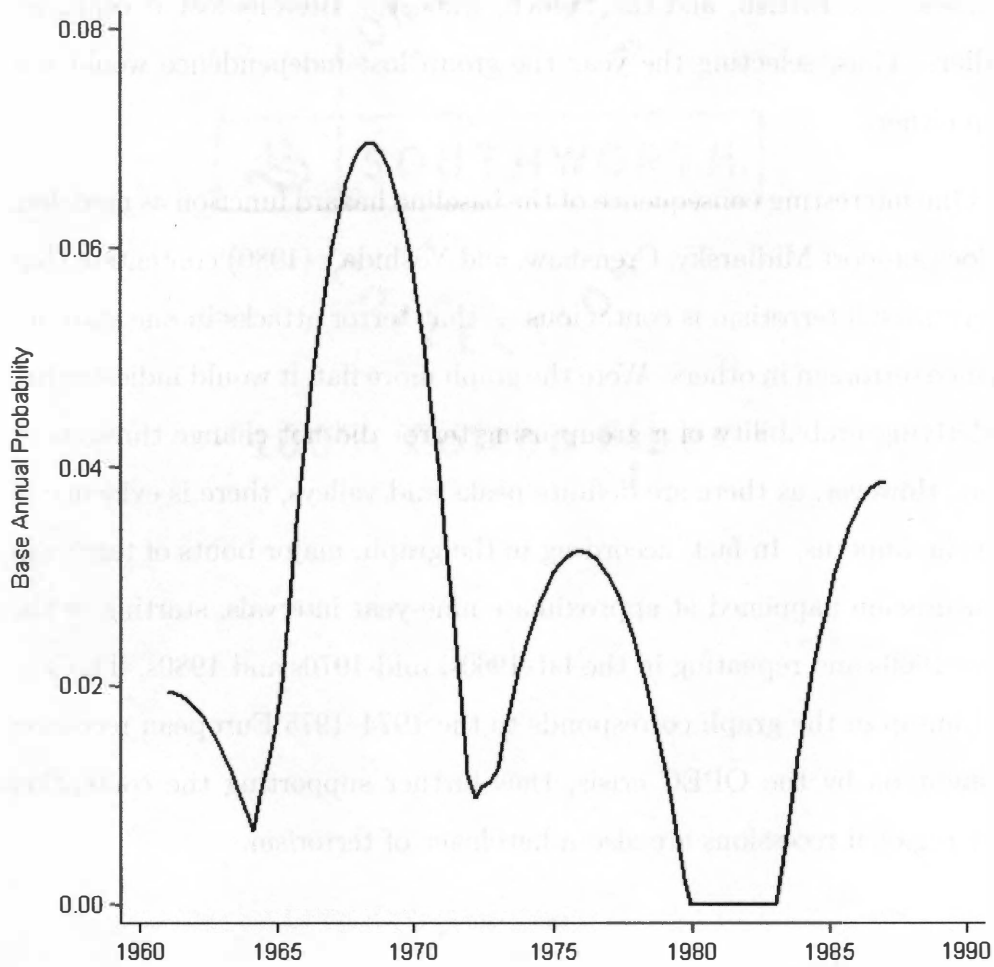
Figure 6.6: The smoothed hazard function estimate using non-parametric means and an Epanechinikov-2 smoothing kernel.

crowns. The Basques lost it in the sixteenth century when the Spanish and French divided the *Euskal Herria*, while the Catalans never really lost it; it just faded away. The Corsicans lost it in the nineteenth century to the Genoese, the British, and the French, while the Bretons lost it centuries earlier. Thus, selecting the year the group lost independence would not help either.

One interesting consequence of the baseline hazard function as modeled, it does support Midlarsky, Crenshaw, and Yoshida's (1980) contention that international terrorism is contagious — that terror attacks in one state influence terrorism in others. Were the graph more flat, it would indicate that underlying probability of a group using terror did not change throughout time. However, as there are definite peaks and valleys, there is evidence of a cyclic impetus. In fact, according to the graph, major bouts of terrorism transmission happened at approximate nine-year intervals, starting in the early 1960s and repeating in the late1960s, mid-1970s and 1980s. The second hump in the graph corresponds to the 1974–1975 European recession brought on by the OPEC crisis, thus further supporting the contention that regional recessions are also a harbinger of terrorism.

6.5 Political Changes

One avenue of exploration this model affords at this point is an investigation into whether or not political changes in the state encourage terrorism or are encouraged *by* terrorism. Political changes can be operationalized in two ways: a fundamental change in the government, such as through a

Table 6.6: The effects of changes in governmental leadership on terrorism propensity.

	Together	Separate
Party Orientation Change, Previous Year	−0.463	−0.281
	(0.357)	(0.427)
Party Orientation Change, Current Year	−0.832**	−0.698*
	(0.285)	(0.283)
Party Orientation Change, Next Year	−1.254#	−1.170#
	(0.662)	(0.647)

Notes: Numbers are logit coefficients. Numbers in parentheses are robust standard errors. The final column is a summary of the effects of each variable added separately to the model. Significance notation: # $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$.

constitutional change or a coup d'état; or a minor change in government leadership, such as a change in the government's political orientation between left and right or vice-versa. I parsed the electoral records of each of the five states under investigation and created indicator variables for each of these two events. I then added them to the full model above. As the major government changes were too few to be of statistical use in this study, I only modeled the political party changes in government.[20]

What are the effects on terrorism probability in the presence of a changed government? According to the results (Table 6.6), changing the government this year has no discernable effect on the probability of a terrorist attack. On average, the effect is to reduce it by a quarter, but the results are not statistically significant at the usual levels. When considering government changes in that year, the effects on terrorism probability

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[20]Again, a larger and more diverse dataset would allow this hypothesis to be tested.

are significant. A change in political party reduces the probability of a terror attack by approximately half.

Finally, when considering the effects of changing the party in power on the probability of terrorism in *the previous year*, the effect is to reduce its probability by a factor of approximately 69%. Unfortunately, the causal arrow for this conclusion points in the wrong direction. As the change in government occurs after the terrorist attack, the conclusion must concern the effects of a terrorist attack on the probability of turning out the current government. Thus, we can conclude that, in the presence of a terrorist attack, the probability of the government being voted out of office is approximately 31%. This is incredibly strong evidence for the "rally around the flag" effect (see, for example, Norrander and Wilcox 1993; Oneal and Bryan 1995).

With this conclusion, it becomes more obvious that the Spanish Socialist party victory in the election taking place shortly after the al Qaeda attack in Madrid on March 11, 2004 occurred in spite of the terrorist attack and not because of it. José Mara Aznar and his conservative *Partido Popular* were having other difficulties with the electorate, especially supporting the US war in Iraq and their handling of the Madrid terrorist attack (Chari 2004; Moret 2004; Romero 2004).[21]

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[21]Chari (2004) specifically found that it was not the terrorist attack, per se, that caused the downfall of the Aznar government, but was rather the perception that he manipulated the situation for political gains.

6.6 State Graphs

Before concluding this chapter, let us look at probability graphs for two of the groups under investigation: the Ulster Catholics and the Scots. These two were chosen as representative samples of the groups, as the Ulster Catholics had a history of terror use throughout the entire time period, while the Scots did not. As they share a common containing state, comparing them should show some of the strengths of the model.

6.6.1 The Ulster Catholics (United Kingdom)

The prediction plot (Figure 6.7) reflects well the underlying propensity for the Ulster Catholics to resort to terror, even without utilizing and accounting for Irish history. To see this, let us examine a little Northern Irish history.

The first incarnation of the Irish Republican Army was a terrorist organization fighting for independence from Britain in the early twentieth century. Their terror campaign, which started in 1919, succeeded. But only partially. Britain partitioned Ireland in 1921, granting independence to Catholic southern Ireland, but only allowing home rule in the north. That is, southern Ireland gained independence, but those counties in the north of Ireland, deemed too Protestant and industrial to join Catholic, agrarian southern Ireland, remained connected to the United Kingdom.
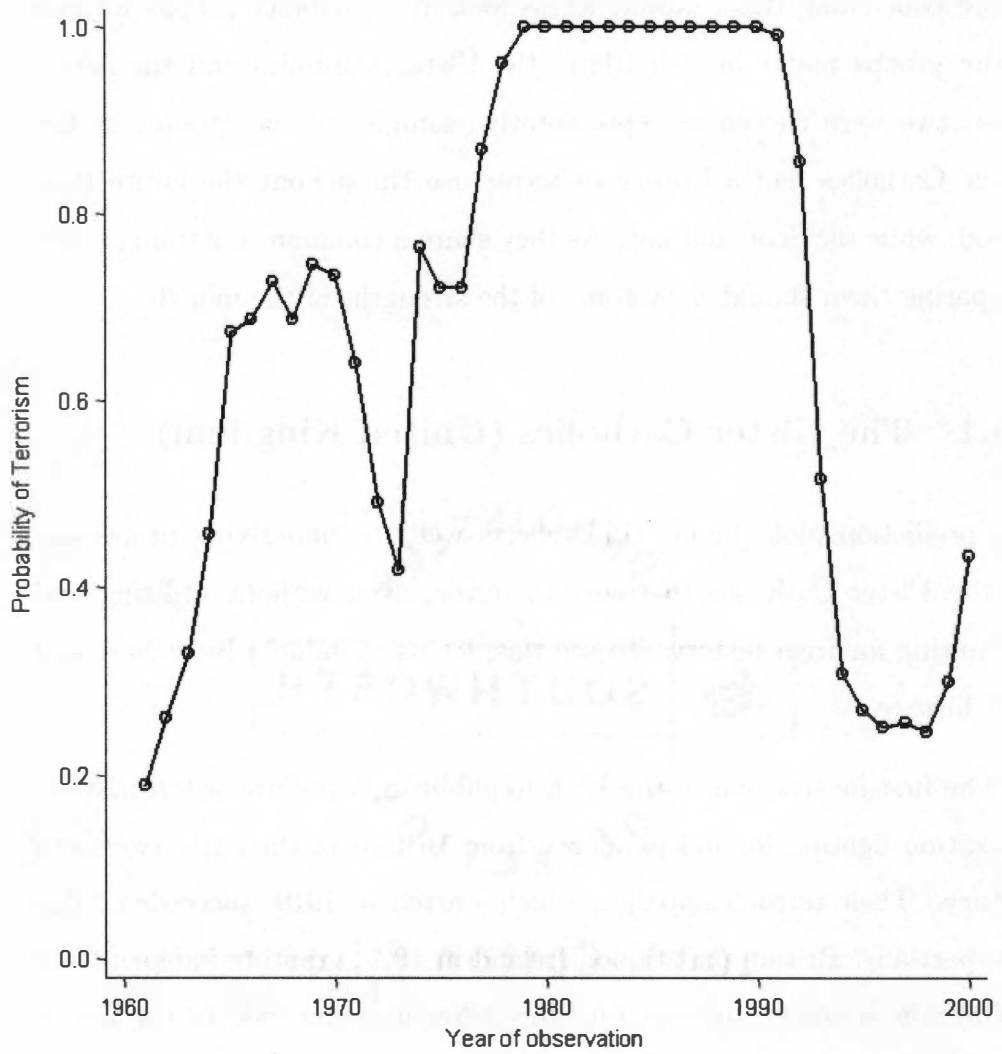
Figure 6.7: The predicted probability of the Ulster Catholics using terror in the United Kingdom, 1960-2000.

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The Catholics in Northern Ireland were discriminated against in employment, housing, and political power. That is how it remained until 1967, when the civil rights movement began (Feeney 2003).

The Northern Ireland Civil Rights Association (NICRA) formed in 1967 as a reaction to the continued discrimination against the Catholics in Northern Ireland. Liberal use of gerrymandering ensured Protestant super-majorities in the British Parliament, and liberal use of the Royal Union Constabulary ensured the personal protection of the Stormont (the Northern Ireland Assembly). The fateful decision to hold a civil rights march in 1969 brought about a counter-demonstration from the Protestants, who did not want to lose their advantages. The marching, both the Catholic civil rights marches and the Orangemen counter-marches, quickly culminated that summer in the Londonderry Catholic neighborhood of Bogside, where the demonstrators and the Royal Union Constabulary clashed in what became known as the Battle of Bogside.

At this point, the Irish Republican Army did nothing to assist the Catholics in Northern Ireland. Their hesitation could be ascribed to either a desire to continue the political process or a desire to allow events to unfold naturally to bring about the socialist revolution. Whatever the reason, a group within the IRA decided to do something direct to assist the Catholics in Northern Ireland. The splinter called itself the Provisional IRA, to distance itself from the Original (or Official) IRA. The Provisional IRA began its campaign of terror in order to finish expelling the British from Ireland and to return all of Ireland to Irish hands. The Irish flag

from this time period emphasized the desire for a united Ireland. The tri-color had colors representing both the Catholic (green) and the Protestant (Orange) aspects of what was to be a united Ireland (Feeney 2003).

The Provisional IRA terror campaign continued for almost three decades, only ending in 1998 with the Good Friday Agreement. Those three decades were filled with car bombs, assassinations, non-combatant casualties, cease fires, and broken cease fires. The total number of people killed by the Provisional IRA during The Troubles is placed at around 1800 — 700 civilians and 1100 British soldiers, RUC officers or unionist terrorists. However, as shocking as these statistics are, loyalist paramilitary organizations and the British Security forces were responsible for over a thousand civilian deaths (Sutton 2002).

The graph of terror probability closely follows several aspects of the above history (Figure 6.7). The onset of the terrorism in 1969 is preceded by a sudden increase in terror probability between 1960 and 1965. The probability remains level except for a quick increase in 1968–69. The actual onset of terrorism occurs at this point. While the split in the IRA was not a part of the model, it was definitely a factor in using terrorism. The probability remains high, reaching near-certainty during the 1980s. During the 1980s, the Provisional IRA began hunger strikes, signed the Anglo-Irish agreement, suffered the unionist backlash and the associated increase in violence, and detonated bombs during a service at the Enniskillen War Memorial (1987) and at Herrod's in downtown London (1983).

Finally, the Good Friday Agreement of 1998 correspond to a low point on the graph. The model does seem to have some predictive ability, at least

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with respect to the Ulster Catholics. The times of high probability on the model correspond to times in real life when the Irish were embroiled in a terror campaign. The timing of the Good Friday Agreement corresponds to a low point in the probability graph. Perhaps the Agreement succeeded where others failed simply because the underlying pressure for terrorism was low enough at that point, whereas it was much too high to allow the 1985 Anglo-Irish Agreement to succeed.

6.6.2   Scots (United Kingdom)

The underlying propensity for the Scots to resort to terror is also well-reflected in the prediction plot (Figure 6.8). To see this, let us examine a little Scottish history.

On March 28, 1707, the Scottish Parliament dissolved, and the Treaty of Union between Scotland and England went into effect shortly thereafter. Almost three centuries passed until the Scots were able to once again enjoy their own independent Parliament when Queen Elizabeth II officially inaugurated it on July 1, 1999. This was the second attempt at granting greater levels of autonomy, with a promise of self-rule, to the Scots since World War II. The first time was in 1979. That attempt failed because of the political wangling by the Scottish nationalists in Parliament, the economic crises of the 1970s, and the resulting loss of popularity in the Labour party (Harvie 2004; Pittock 2001).

But the failures of the Labour party in the 1970s led to the successes of the Conservatives in the British Parliament. The prospering economy

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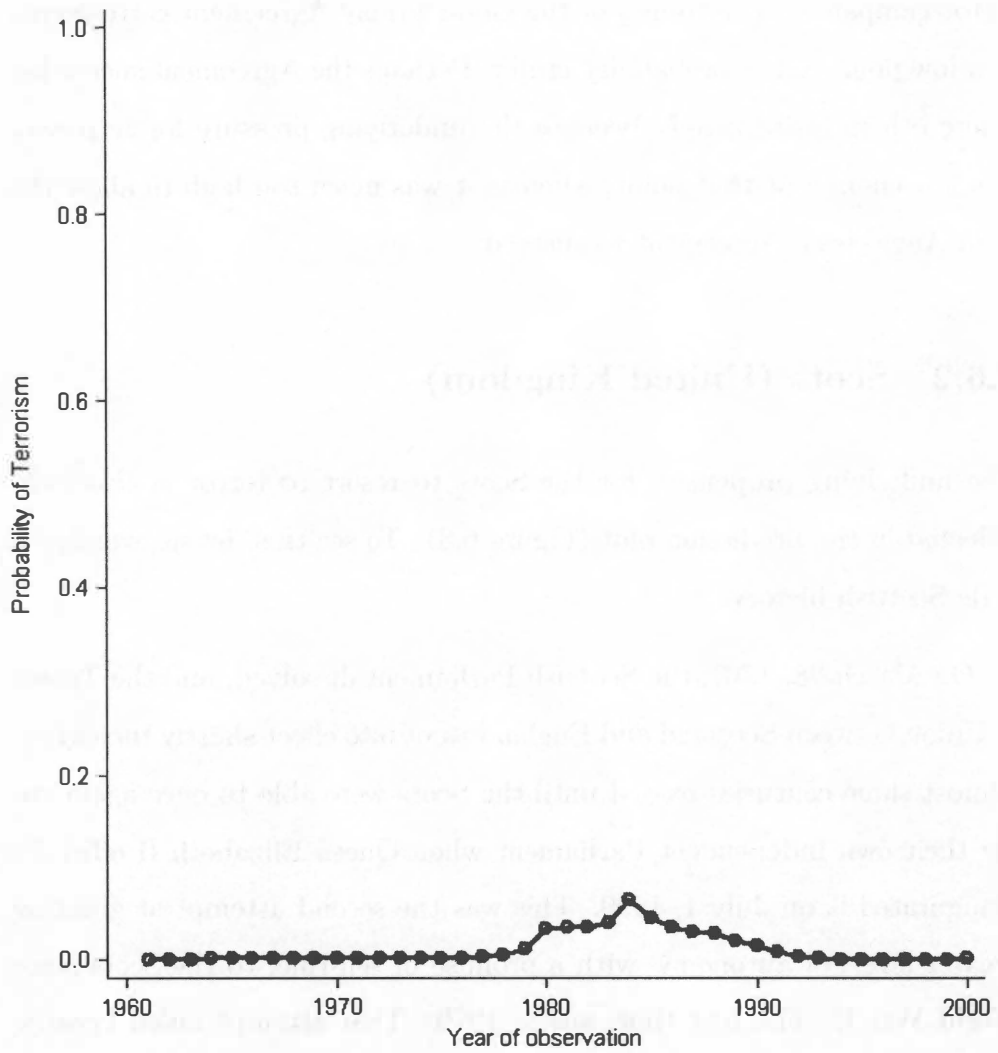
Figure 6.8: The predicted probability of the Scots using terror in the United Kingdom, 1960-2000.

throughout England and Wales kept the Labour party from regaining power until Major lost it in the 1997 election. However, the prosperity of the 1980s did not immediately reach to the Highlands. With Scotland's economic emphases on its traditional industries of coal, steel, and ship-building, the Scots felt the intense pressure of increased unemployment. Consequently, two things resulted: First, the Conservative government in Parliament, recognizing the problems inherent in unemployed Scots, began offering economic incentives to giant electronics firms like IBM, NEC, and JVC to entice them to come and build factories in Scotland.[22] Second, it showed the Scots, traditional supporters of the Labour party, that they could not wait for the rest of Britain to vote Labour; they would have to have their own parliament (Pittock 2003; Somerset Fry 1985).

The economic incentives were a success. The resulting "Silicon Glen" reduced unemployment and increased prosperity in Scotland. The creation of the Scottish Parliament, however, happened neither as quickly nor as easily. By the time the Conservative government allowed the referendum in 1997, the question was not if it would pass, but by how much. The results showed the British Parliament just how important self-rule was to the Scots — 75% of the voting Scots voted in favor of creating the Scottish Parliament, and 63% voted in favor of granting it taxing ability (Halliday 1990; Patterson 1998; Payne 2002). However, through all of this, while nationalist parties existed in Scotland (the Scottish Nationalist Party, for example), none resorted to terror campaigns to achieve their ends. Their actions remained well within the pale. A quick glance at the plot of terror

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[22]By 1996, the Silicon Glen produced 35% of Europe's PCs and 12% of the world's semiconductors (Hargrave 1985).

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probability over the years for Scotland (Figure 6.8) shows that a significant underlying push for terrorism never existed, simply because the conditions never got bad enough to create an action pressure high enough to overcome the natural aversion towards terrorism.

6.7 Chapter Summary

This chapter started with a look at the statistical models needed to adequately test the hypotheses of the previous chapter. As the dependent variable was binary, OLS could not be used without severe violations of its assumptions. As such, three binary dependent variable models presented themselves: the logit, the probit, and the complementary log-log. As all three produced similar results, each could be used to explore the relationship between terrorism and the selected factors. A second aspect of the data implied that an autoregressive-1 correction needed to be used to remedy the serial correlation inherent in some of the variables, most notably the gross domestic product per capita, the level of democracy in the state, and the urban percentage. The current values for each of these variables definitely depends on the previous values. This is what the AR1 modification corrects.

All of the models behaved in similar manners; that is, the same variables tended to be statistically significant in each. This demonstrates the robustness of the findings. No significant coefficient changed directions,

although one non-significant coefficient did.[23] Furthermore, the constant term remained highly significant and highly negative, thus lending evidence to the claim that there is an inherent aversion to the use of terrorism in the world.

All significant variables were in the predicted direction except for the ethnic differences index. Closer examination of this finding revealed that, of the four components comprising the index, only one of them was significant and in the hypothesized direction: language differences. In other words, groups speaking a different language than the surrounding state are more likely to use terrorism — perhaps this is a reflection of an inability to communication.

Once again, the evidence supports the finding that a more democratic state is more likely to experience domestic terrorism. While the models were unable to speak to the effects of democracy, per se, they were able to suggest that the act of increasing the level of democracy in a state leads to this conclusion. That is, instead of just finding states with higher levels of democracy are more at risk, the models found that increasing the level within the state also increases the risk.

So, should we conclude that creating democracies in the world will increase the virulence of terror groups? Not necessarily. There is a definite correlation between the level of democracy in the state and other variables in the model, specifically GDP per capita, trade level, and economic differentials. In each of these cases, the effects of increasing the level of

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[23]The percent urban variable changed direction, however in each model the standard error was greater than the coefficient itself.

democracy or simply creating a democracy may reduce the total terror probability.

Thus, with the agreement of so many of the variables with the model, the model and the theory performed quite well given the small sample size. The two vignettes compared the events in real life with the predictions of the model. The fit was remarkable. Not only was the onset of terrorism in Northern Ireland reflected in the model, but so was the failure of the Anglo-Irish Accords of 1985 and the later success of the Good Friday Agreement of 1997. The action pressure towards terrorism was just too high to be overcome by the treaty in 1985. However, by 1997, the pressure had dropped to a level that allowed for a successful peace agreement.

The next, and final, chapter revisits the initial question around which this work centered itself. The concluding remarks suggest some policies governments may take to reduce the probability of a domestic group resorting to terror in their state. As the model so clearly evidenced, it is much easier to stop a group from initially using terror than it is to stop a group that is already using it.

Chapter 7

Denouement

> Prediction is very difficult,
> especially about the future.
>
> ——————————————————
> Niels Bohr

Where does this leave us? As with most stories, the answers are found in the opening lines. Here, we start, once again, questioning why some ethnonations resort to using terrorism, while others do not. In each case, and at first glance, it appears as though an idiographic approach would be more appropriate, as each group ostensibly starts using terrorism for a different reason. However, the advance of the discipline encourages us to move beyond treating each state and ethnonation as if it were a world unto itself and to find the common causes and factors among them. In short, science encourages a nomothetic approach. Let us begin this chapter with a few vignettes, proceed through the lessons we can apply to public policy, and conclude with a call to arms.

7.0.1 The Jurassiens

The Congress of Vienna of 1815 formally ended the Napoleonic era for France and for Europe. It also settled the frontiers of Switzerland, including the internal ones — the Helvetic Republic was one of Napoleon's puppet states. Inside Switzerland, the redrawn borders did not necessarily conformed to either language distinctions or to religious distinctions. As a result, the Jurassiens, formerly of Canton Basle, became members of Canton Berne; that is, the francophone Roman Catholics originally citizens of Catholic Basle became citizens of the germanophonic, Protestant Canton Berne at the stroke of a Viennese pen (Nicolson 2001; Viault 1990).

However, it was not until the Bernese legislature rejected the appointment of a Jurassien to the Bureau of Public Works that the Jurassiens formed their first political movement with a goal of achieving either greater autonomy or separation from Canton Berne. The movement culminated in a popular referendum in 1959 to create a new canton. It barely failed to pass, with 52% voting against and 48% voting in favor. However, far from stopping the movement, the failure at the polls induced them to continue agitating for autonomy. The failure of the referendum brought about the formation of three political parties: the *Rassemblement jurassien* (RJ) supported separation, the *Force démocratique* (FD) supported continued union with Canton Berne, and the Movement for the Unity of the Jura (MUF) supported a unified Jura with a greater degree of autonomy within Canton Berne. Later, the RJ split into a group dedicated to continuing the political process and a group dedicated to achieving their goals by any means necessary. The latter group, the *Front de libération jurassien* (FLJ),

was responsible for attacks on Bernese and Swiss infrastructure (J. Jenkins 1986).

A second referendum was placed before the voters in 1974. In the Bernese Jura, the results were very similar to the earlier referendum, 52% against and 48% in favor. However, the vote was most assuredly polarized based on geography; those districts in southern Jura tended to vote against separation, while those in northern Jura tended to vote in favor of it.[1] As a result of this obvious polarization, a series of referenda were held to determine which districts would separate from Berne and become part of the new Canton Jura. On January 1, 1979, the Swiss legislature granted recognition to the newest canton in Switzerland, composed of those northern districts supporting separation in the latest poll (J. Jenkins 1986; Steinberg 1996).

However, this did not end the story of Jurassien separatism. The actual terror campaign began *after* the creation of the new canton. The primary actors were the same, as were their goals. The only change was in location. Now, the separatist activity took place in southern Jura, the section still a part of Canton Berne. The RJ still sought to separate the southern Jura from Berne. The FD still wished continued connection to Berne. The MUF still sought to unite all of Jura under one canton, no matter which one. And, even more importantly, the FLJ still violently agitated for independence from Canton Berne. While the FLJ had been content to merely agitate for separation, which consisted of public demonstrations and

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[1]This difference based on geography was not surprising, for the south had more contact with the rest of Berne than did the north. As a result, the Bernese culture and people had invaded the southern Jura (J. Jenkins 1986).

a few riots, in the early 1990s, they initiated a short-lived terror campaign. The only result, thus far, of that terrorist campaign was a referendum for the village of Vellera to leave Canton Berne and join Canton Jura. The referendum passed overwhelmingly. Interestingly enough, at the time, Vellera had a population of 70 (Minorities at Risk 2000; Steinberg 1996).

Switzerland is, and was, an extremely stable democratic state — arguably the most stable in Western Europe. Switzerland also has a large level of citizen involvement in legislation, being the only state that has regular federal-level referenda. And yet, some Jurassiens resorted to a campaign of terrorism to right the wrongs of generations past. When compared to what other ethnonations have experienced (and currently experience), the Jurassiens seem to have little expectation to initiate a terror campaign, especially in light of the strong political tradition in Switzerland. And yet, they have. Why?

7.0.2 The Sardinians

The tale of Sardinian separatism is rooted in the very formation of the Italian state. While Victor Immanuel II was nominally king of Sardinia, his was a Piedmont monarchy from the north of Italy. And while the two lands were politically unified, the prejudice against the south as backward, corrupt, and violent kept them from being culturally unified. In fact, the entire unification of Italy — the *Risorgimento* — was a series of battles in which the north repressed, suppressed, and oppressed the south. Those in Sicily, Naples and the Papal States, were taken by force and placed under

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the banner of the new Kingdom of Italy. Those in Sardinia, already a part of the original Kingdom, had no option but to accept the solutions the Piedmont monarchy created (Ammendola 2003; Morrogh 2003; Smith and Smith 1980).

A combination of the historical corruption of the rulers in Rome, the feelings of superiority expressed by the northerners as shown in the maxim "Africa begins south of Rome", the internal colonization of Sardinia by the prosperous north, and the repression of the Sardinian language all exacerbated the feelings of separateness felt by the insular Sardinians. The Kingdom of Italy, and the later Republic of Italy, have both promised increased economic investment in Sardinia, however the industries given to Sardinia polluted the environment, and the number of jobs never seemed to be as great as what was promised (Krippendorff 1979; Roberts 2003).

And yet, the Sardinians, existing in one of the least stable democracies in Europe,[2] have yet to resort to a campaign of terrorism to right the wrongs of generations past. Even when the Sardinian separatist party joined the Italian Red Brigades in the 1970s, they did not resort to a terrorist campaign. When compared to what other ethnonations have experienced, the Sardinians seem to have every expectation to initiate a terror campaign, and yet they have not. Why?

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[2]That is, least stable in terms of the frequent votes of no confidence and frequent government dissolutions in the Italian Parliament.

7.0.3   The Spanish Basques

The *Euskal Herria* straddles the Pyrenees, divided between Spain and France. The seven provinces — four in Spain and three in France — are still considered by the Basques to be one nation — inseparable.[3] Both states instituted centralization campaigns to bring the disparate parts of each under firmer control of the central government. Both states discriminated against the Basques, both in terms of culture and of language. And yet, only the southern Basques have resorted to a terror campaign; the French Basques have not. Why?

7.0.4   The Answers?

In each of the three above cases, the answer may lie in the state itself. However, while the French Basques have been quiet, neither the Bretons nor the Corsicans can claim this. And, while the Spanish Basques have resorted to terrorism, neither the Catalans nor the Galicians have.[4] What makes one ethnic group resort to terror, while another does not? This question was the raison d'être of this research. And while the answers to this question are far from complete, the mechanism behind group actions toward terrorism is better understood. In understanding that mechanism, we are able to better predict which groups will resort to terrorism and dissuade them from doing so. Considering that it is much less expensive,

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[3]A form of separatist graffiti is "4 + 3 = 1" (Kurlansky 1999).

[4]This may change in the next few years, as a Galician separatist group detonated a car bomb in the central plaza of Santiago de Compostela, Spain on July 23, 2005 (Goodman 2005).

both in terms of resources and lives, to keep terrorism from happening than it is to stop it once it has begun, emphasis should be on prevention. However, the current emphasis is on punishment after the fact.[5]

7.1 The Mechanism

We began this journey with several separate descriptive theories of terrorism. These theories described many mechanisms for what caused groups to engage in terrorism. Each level of analysis had its own set of factors. Crenshaw (1981) suggested that concrete grievances, modernization, democracy, urbanization, history, elite dissatisfaction, and mass passivity all contribute to increasing the probability that a state will experience terrorism. But why? She provided excellent rationale for why each one would be a precondition, but she lacked a fundamental theory tying it all together.

Similarly, Ross (1993) provided a descriptive theory of terrorism, especially with respect to the structural causes. He cited modernization, geography, urbanization, regime type, grievances, support, weapons availability, and presence of other forms of unrest as factors leading to terrorism. However, he offered nothing to tie all of these factors together. While his explanation as to why these factors affected the propensity towards terrorism, he offered nothing fundamental to tie everything together. While this performs acceptably in determining some factors that can be affected to

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[5]This may be slowly changing, as the first Madrid Conference on Terrorism, March 2005, concluded with a call to reduce the causes of terrorism, not just punishment of terrorists. In fact, many of the presenters warned that the War on Terror may create more terrorists than it eliminates (Annan 2005).

alter the probability of a terrorist outbreak, it does nothing to explain the underlying why.

This is the primary strength of this research piece. I offered a theory of terrorism that was more fundamental than descriptive. The underlying mechanism lay exposed. The reasons for terrorist outbreaks I placed at the feet of human beings and not at the feet of the intangible 'group', 'state', or 'state system'. Those factors at higher levels of analysis we can now trace back to the individuals through a process of aggregation — the state system consists of states, the states consist of various groups, and those groups are composed of individuals. Factors affecting the individual filter their way to the top of the pyramid through the associated pressure of the group to act in a way that mimics its members.

At the individual level, the person feels a pressure to act when they experience a reality at odds with what they perceive as being just. Using the vocabulary of rational choice, the individual feels a pressure to act when their ideal point differs too much from the setting in which they exist. A greater disparity between these two creates a greater impetus for action — or reaction. Thus, Gurr's (1970) finding that relative deprivation is an excellent indicator of future political violence is supported. Relative deprivation is merely the idealized distance between the individual's ideal point and their real point — between what they feel they should have and what they actually have.

This aggregates upward to the group level. At the group level, the actions of that group are based primarily on the action point of that group. This group action point is based on the ideal points of each of the group's

members, appropriately weighted to take into consideration the individual's standing within the group. For a group with the majority of the members with ideal points located near the 'political' end of the spectrum, the group will tend to be less likely to resort to terrorism; i.e. the group leadership will feel less pressure to use extra-political means and more pressure to use political means to solve the problems. For a group with an action point located near the 'extra-political' end of the spectrum, the leadership feels a pressure to resort to violence.

Thus, Crenshaw's assertions that concrete grievances against the state contribute to increased terrorist activity is explained. When an individual has a grievance against the state, his or her ideal point is at greater odds with the real point than in the absence of such a grievance. When individuals aggregate to form the group, this grievance is present in the group members, thus moving the group's ideal point more toward the extra-political end, especially in the presence of state repression or absence of political avenues which the groups can utilize to achieve their goals.

At the state level, the actions of those in power affect the individual's real point and the costs associated with acting on those felt pressures. Thus, the near-universal finding that democracies are both the creators and the targets of more terrorists than other regime types is neatly explained, even though democracies allow for increased political activity and have lower levels of repression than autocracies. Democracies reduce the cost of action; they are subject to the Rule of Law. Being subject to the Rule of Law reduces the state's ability to eradicate the entire terrorist group. In authoritarian regimes, entire groups can be exterminated. Such is not

permissible in a liberal democracy. The ultimate penalty for a terrorist in a democracy constrained by the Rule of Law is his or her execution. In dictatorial regimes, the ultimate penalty is the execution of the terrorist, his or her family, perhaps economic sanctions against the village, perhaps bulldozing of the terrorist's family's house, etc. There are no theoretical limits to the punishment handed down by strong authoritarian regimes against terrorists. There are in democracies.[6]

Moreover, democracies tend to have freedom of association enshrined in their traditions and constitutions. This increases the probability that like-minded people will come together to form their group. Authoritarian regimes tend to reduce the ability of its citizens to come together. If a group cannot form, or if the costs are too high to allow its formation, it cannot become a terrorist group.

Ross's finding that failures of counter-terrorism efforts increase the probability of a terrorist attack is upheld in this theory. The effect of a successful counter-terrorist strategy is to either increase the cost of acting or to reduce the pressure to act. When the strategy fails, the opposite obviously occurred. In addition to the indication of decreased action costs and increased action pressure, there is the explicit immediate decrease in action cost due to the actual collapse of the counter-terrorism structures and the resultant vacuum.

An additional finding, not fully accounted for by Gurr (1970), Crenshaw (1981), or Ross (1993), but alluded to in each, is that states without

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[6]The exception to this rule seems to be democratic Israel, which had a long-standing policy of bulldozing the homes of suicide terrorists.

full control over their territory are also at increased risk of creating or experiencing terrorism. This can be explained by the associated reduced cost of action. If the state does not control its entire territory, the group can operate with impunity, reducing the cost of existence to almost nothing. This is an important finding because there are several areas of the world not under control of a state. These include the failed state of Somalia and vast stretches of the Sahara Desert. In the latter case, the Bush administration "believes the Sahara desert is a vast ungoverned wasteland and, hence, a haven for terrorists" (Fellows 2005).[7]

The system level, especially in terms of globalization, strongly influences the individual. Midlarsky, Crenshaw, and Yoshida (1980) suggested that terrorism in one state affects the probability of terrorism in a second state through the processes of diffusion and contagion. While they asserted that it was "difficult to identify indigenous sources of terrorism," they did find that there were connections on the system level between terrorist groups (Midlarsky, Crenshaw, and Yoshida 1980: 263). While their analysis used only seven years, and while sweeping conclusions based on such a small time span cannot be made with any enormous level of confidence, their conclusion fits nicely in the pressure model. While their findings suggested that the cost of terrorist action is reduced by other groups resorting to terrorism — a conclusion not in opposition to the theory — they also suggest that there is some underlying system-level factor

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[7]In fact, the Bush administration sent 1,000 personnel to take part in an anti-terrorist training exercise. "The exercise's fictional scenario involved a terrorist group being chased across national borders from Mauritania in the west, through to Mali, Niger and finally Chad" (Fellows 2005).

not accounted for by their theory. In other words, terrorism can be contagious in their sense of the word, or the milieu in which everyone exists could be affecting the base probability a group resorts to terrorism. Their research supports both interpretations. The pressure model also supports both interpretations. Figure 6.6 demonstrates that the base probability of a terrorist event has dramatically fluctuated over the years, reaching a high in the late 1960s and a low in the early 1980s. The timing of the peaks, however, is less important than the existence of those peaks.

Beyond the general increase or decrease in base terror probability, the system level produces some dynamics that directly affect the individual and his or her action pressure. The most important of them are due to the effects of globalization. "Globalisation is a political phenomenon characterised by the weakening of mediating institutions and the direct confrontation between individuals and global forces" (Guéhenno 1998: 5). That is, globalization increases the exposure of the individual to system-level forces and reduces the ability of the state to protect that individual. While this is true economically, it is also true culturally. With the increase in a global culture, especially a democratic culture as defined by the liberal, democratic West and as spread through the new global media, ethnonations may easily feel as though their culture was being sacrificed on the altar of economic advancement for the few. And, as globalization reduces the state's ability to mitigate these issues, globalization increases the threat felt by the ethnic groups to their way of life.

Globalization is also characterized by rapid modernization and economic changes. The shift in many advanced industrial states away from

expensive industry and toward less expensive service-sector employment may increase the average income in that state, but that increase comes at the expense of industrial workers losing their jobs in well-paid positions. Sometimes, these industrial jobs are traditionally held by one ethnic group, as in the case of the Scots and the Basques. In such cases, the economic differentials become conflated with the ethnic differentials, with both factors increasing the probability the group will resort to terrorism.

In each of these three cases, the effects of the system-level factor directly affect the individual level in predictable and explainable ways. There is no need to create a new theory to deal with the system-level and the effects of globalization on terrorism; the effects are already explained in the model proposed. The only theory needed is a theory on the behavior of humans, which we call psychology. Thus, terrorism is the manifestation of psychology — writ large.

7.2   Future Perfect Tense

This research, at least from a policy standpoint, is timely. Each significant factor is being affected by current global trends. Globalization continues to increase at an exponential rate. The number of adolescents in the world grows constantly, and they constitute the largest segment of the population in several African states.[8] Population growth rates continue to stress the available resources. US foreign policy explicitly advocates democratization

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[8]In Djibouti, those under 16 constitute almost half of the population, the median age in Nigeria is 19, and over 53% of Africans are under age 19 (CIA 2005; Gibbs 2004).

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(Bush 2005) and there are currently more democracies than autocracies in the world (Freedom House 2005).[9]

We are currently at a nexus, a critical juncture in history. With all of these trends conspiring together, there is little doubt that the prevalence of terrorist activity will grow at an ever-increasing rate unless action is taken to deal with the underlying causes of terrorism. Repression tends to not work (Mason and Krane 1989; Sederberg 1995). And yet, conciliation is frowned upon by political leaders even though state leaders have successfully used it in the past — most notably in Northern Ireland (Bueno de Mesquita 2005c; Sederberg 1995; Stevenson 1996). Charges of 'appeasement' and specters of 'Munich' haunt most attempts to try to understand the terrorists. The principal result is a knee-jerk reaction to terror strikes.

The US War on Terror is the quintessential response to a terrorist attack — punishment. Even security scholars would tend to agree with the response in theory (although not necessarily in practice). Posen (2003) suggests that the appropriate strategy in dealing with terror groups is to reduce the groups in terms of both population and support, until only "desperate groups of exhausted stragglers, with few resources and little hope of success" remain to commit the acts of terror (Posen 2003: 393).

However, there is a growing body of research, and a growing number of researchers, who hold that such tactics do nothing to stem the tide of terrorism. Lesser (1999), writing for the conservative think-tank RAND, concluded his research with four core strategies the United States should

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[9]For the year 2004, Freedom House had the number of free states at 88 and the number of not free states at 49 (Freedom House 2005).

use to minimize its risk of again being attacked by terrorists. Retaliation is the fourth, and he only suggests its use when the other three fail. What was his first core strategy? It is to reduce the systemic causes of terrorism.

While he spends little time on what these systemic causes may be, this research provides three important ones: globalization, negative economic differentials, and adolescence. The primary negative effect of globalization is rapid change. People are faced with new ideas. They must deal with new employment emphases. They must confront new incursions into their very self (Kellner 2002). With respect to terrorism, globalization results in a greater probability in a group using terrorism. This is due to the individuals in the group experiencing a higher pressure to act.

The need to act flows from two areas. First, the group may feel a disconnect from its traditions. While not a result of globalization, the South Tyroleans violently reacted when the Italian government began to eliminate their traditions (Alcock 1970; Steininger 2003). The Spanish Basques reacted similarly when Franco instituted his policy of forced Castileanization (Collins 1990; da Silva 1975; Laitin and Gomez 1992). Globalization has a similar effect on indigenous culture (Cha 2000; Kellner 2002; Krugman and Venables 1995).

Second, the group may feel discriminated against because their traditional industries may need to lay off workers in order to remain profitable. They may even have to close if they cannot compete in the new marketplace. The Scots felt economically discriminated against when their traditional iron, coal, and automotive industries began closing their doors because of economic pressure brought about by the increase in trade among

the states. It was only after large tax breaks were given to other industries that the unemployment rate in Scotland dropped (Pittock 2003). Similarly, the Basques felt discriminated against when economic shifts negatively impacted the prosperous heavy industry in the Basque region (Medrano 1994).

To counteract the negative results of globalization, efforts must be made by the state to reduce the resultant effects. First, the state must refrain from repressing ethnic expression in any way. Repression only accentuates the ethnic divisions in the state. In fact, the state may actually wish to encourage ethnic expression. While one may feel that expressing the difference between ethnic groups in a state will result in higher rates of terrorism because of the accentuated differences, this research shows that higher levels of ethnic differences do not correspond to higher probabilities of terrorist actions. In fact, they correspond to *lower* probabilities.

Also, to deal with the employment shifts, the state must encourage re-education and retraining in the areas hardest hit by the globalization-inspired unemployment. Following the example of Britain with Scotland may significantly reduce the effects of globalization. In the 1980s, Margaret Thatcher, the prime minister of Great Britain, instituted several economic reforms and increased the economic aid to areas of Scotland hardest hit by unemployment and the 1980s recession (Pittock 2003).

One further possible result of globalization is an increase in the economic differentials between the ethnonation and the containing state. Whether caused by globalization or not, these economic differentials are the second powerful indicator of future terrorist activity. A greater level of economic

differences between the group and the rest of the state leads to a greater level of terrorism in that state perpetrated by that group. Any policy which reduces the differences will reduce the probability the groups will resort to terrorism.

There does not need to be any tradeoff between state actions to ameliorate the effects of globalization and of economic differentials. In fact, such actions tend to complement each other. For an example, see the British actions vis-à-vis the Scottish economy. A further example is that of the Spanish in the *Hegoalde*. When the Basque traditional heavy industries of coal and steel began to encounter economic problems, the Spanish government did nothing. This was over and above the nothing they did to counteract the modernization that threatened Basque *fueros*, rights, and traditions (Ben-Ami 1991). The differences between the outcomes are staggering.

There are other possible actions the state could perform if eliminating terrorism is their ultimate goal. As the number of youth in a state is a strongly positive correlate of terrorism, state policy to reduce this number would also reduce the risk of terrorism. Perhaps the most effective thing a state can do to reduce the number of youth in the state is to encourage economic development, as economically developed states tend to have lower birth rates, and thus a lower adolescent population (Crenshaw, Ameen, and Christenson 1997). But this economic development needs to be uniform across the ethnonational groups in the state; otherwise the probability of terrorism will increase due to the increasing economic differentials. The amount of income redistribution necessary would be staggering in many

states. The very issue of redistribution of wealth conjures up images of communism. Some may even consider redistribution as just a euphemism for paying off the terrorists. Thus, while the answer to reducing terrorism is apparent, the actual necessary political steps are fraught with political landmines.

Perhaps the existence of youth need not dramatically increase the probability of terrorism in the state. Perhaps the state can implement long-term policies which ease the transition through this hormonal age. Shepherding the youth, giving them outlets for their evolutionary aggression, and socializing them into society and society's duties, rights, and responsibilities better can all work to reduce the effects of adolescents on terrorism. In addition, the state can institute policies for pre-adolescents that will also ultimately reduce their propensity for violence. Such policies may also reduce other negatives in the state. Studies have shown that health risks, depression, and dropping out of school. Each of these has the immediate effects on that adolescent; however, each also has long-term effects. Not completing school reduces a person's earning potential and employability, thus increasing the economic disparities between that individual and surrounding individuals. Increased levels of depression increases feelings of despair and hopelessness, and, thus, may increase violent feelings. (Hagan and Foster 2001; Harris 1948).

Lastly, a state could also reduce the level of democracy to combat terrorism.[10] Both the higher levels of democracy and increasing levels of

[10]There seems to be a tendency for states to do just this. In the aftermath of a severe terrorist attack, the government feels compelled to reduce civil liberties to make capturing and prosecuting terrorist suspects easier. This is not only true of the United

democracy are correlates of terrorism. However, as the level of democracy is also highly correlated with economic development, the actual results may not be as predicted by the model, as democracy apparently affects other correlates of terrorism (Arat 1988; Przeworski and Neto 1997). While Fascist Italy was quite capable of keeping their ethnonations from coalescing into effective groups, and while Franco's lessening of his controls resulted in an increased level of terrorist activity from the ETA, I am acutely uncomfortable suggesting public policy to reduce democracy levels in the state. This is especially true because the number of states in the study is small (n = 5). What is it about democracy that produced this result? Democracy's adherence to the Rule of Law and its love with freedom of expression and association allow terrorism to flourish within its borders.

Political changes in the government do have a slight calming effect on terrorist activity, however not at a statistically significant level. In the year following a political orientation change in the state, the average probability of a terrorist attack dropped slightly. The change indicates that the terrorist attacks are partially in response to policies of political parties.[11] Should a party be removed from power, the average probability of a terrorist attack drops slightly. However, it is unclear at this juncture if this finding is

States after September 11, 2001 (e.g. the USA PATRIOT Act), the United Kingdom instituted several policies designed to enable them to capture IRA suspects much easier. These policies included arrest and detention without trial of people suspected of being members of terrorist groups in Northern Ireland (Coogan 2002).

[11] At this point, there is no evidence that liberal-to-conservative changes cause a different response from terrorist groups than conservative-to-liberal changes. This, however, is an interesting question that must await an enlarged dataset.

a statistical artifact due to the small sample size or if its statistical significance will increase with a larger dataset.[12] Furthermore, disaggregating the data to something more precise than annual measures may also help ascertain the true relationship between terrorism and political changes in the state.

7.3 All Good Things . . .

So, where does this leave us? A list of policies that states should implement to reduce the probability of domestic terrorism is not the same as states supporting this list. The current War on Terror will likely solve nothing. In fact, many academics feel it will only create more terrorists — much in the same vein as did the shelling of the hills overlooking Beirut by the USS New Jersey.[13] But there is hope that this outdated paradigm is shifting to something more capable of returning terrorists to the political realm.

On March 11, 2004, a group perpetrated a major terrorist attack on Madrid. Initially, the government blamed the ETA; however, it turned out to be the work of al Qaeda. To mark the one-year anniversary of the attack, the Club de Madrid hosted an international summit on the causes and solutions to terrorism. Three days of sessions and speakers crafted the same

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[12]Again, recall that there are only five states under scrutiny.

[13] "A few months later, Arab terrorists took over a TWA flight from Athens and executed a U.S. Navy seaman on board, as they railed that it was payback time for the Beirut bombing. One hijacker kept yelling 'New Jersey! New Jersey!' as terrified passengers cowered in their seats. He was talking about the battleship New Jersey, which had rained down death and, yes, terror in the form of 2000-pound shells on Beirut the previous year" (Raimondo 2003).

conclusions. Javier Solana (2005), former Secretary-Gerneral of NATO and the Secretary-General of the Council of the European Union/High representative for the Common Foreign and Security Policy, during one of the last plenary sessions perhaps said it best,

> ...vivimos en un mundo profundamente injusto y mientras sigamos teniendo un mundo tan injusto, seguiremos teniendo problemas de esta naturaleza sin ninguna duda. El siglo 21 tiene que ser un siglo en el que nos enfrentamos con estos problemas seriamente. Solamente quiero decir que lo que vamos viendo en los últimos años es que los países más ricos son más ricos cada día y sus poblaciones son más viejas cada día, y los países más pobres son más pobres cada día y sus ciudadanos son cada día más jóvenes. La mitad de la población mundial tiene menos de 25 años. Creo que esta reflexión es la más importante para que nos enfrentemos de verdad con los graves problemas que tenemos en estos momentos, unos de los cuales es el terrorismo, pero hay muchos otros que conducirán sin duda, si no los resolvemos, al veneno que lleva a algunos a utilizar las armas de terrorismo.

Roughly translated,

> ...we live in a profoundly unjust world and, while we continue having such an unjust world, we will continue having problems of this nature, without doubt. The 21st century must be a

century in which we confront these problems seriously. I only mean that what we are seeing in the last years is that the richest countries are richer every day and their populations are older every day, and the poorest countries are poorer every day and their citizens are younger every day. Half of the world's population is younger than twenty-five. I believe that this reflection is the most important, for if we do not confront the grave problems we have at this moment, one of which is terrorism, then there are many others that without doubt will lead, if they are not resolved, to the venom that makes some resort to using the arms of terrorism.

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Appendix

Codebook

BELIEF   Different Group Religion   MAR 31

0: Unknown

1: Different sect within same religion as the dominant group.

2: Multiple Sects; some different from dominant group.

3: Different Religions.

99: No basis for judgment.

-99: Missing Value.

CUSTOM   Different Group Customs   MAR 30

0: The same social custom as dominant group.

1: Different social custom than dominant group.

99: No basis for judgment.

-99: Missing Value.

DEMOC   Democracy Level of the State   p4v2002

Range: 0 – 10

-99: Missing Value.

DEMOC_D   Change in Democracy Level   EQN

Range: -4 – 3

-99: Missing Value.

DEMOCRACY   Democratic State?   EQN

$$DEMOCRACY = (POLITY2 > 5) \text{ AND } (POLITY2 < missing)$$

Range: 0 – 1

-99: Missing Value.

ECDIFXX   Economic Differentials Index   MAR 121

The Economic Differentials Index is a seven-category scale (values from -2 to $+4$) of intergroup differentials in economic status and positions derived from codings of six dimensions (i.e., ECDIFX1 to ECDIFX6). Economic differentials are equivalent to economic inequalities but are not necessarily the result of deliberate discrimination.

-2: Advantaged. There are 3 or more checked advantages.

-1: Some advantages. There are only 1 or two checked advantages.

0: No socially significant differences. A "socially significant" difference is one that is widely seen, within the minority, and/or the dominant group, as an important distinguishing trait of the group.

1: Slight differentials. There are socially significant differences between the minority and the dominant group on one or two of the specified qualities (i.e., there are one or two components checked).

2: Substantial differentials. There are socially significant differences with respect to three specified qualities.

3: Major differentials. There are socially significant differences with respect to four specified qualities.

4: Extreme differentials. There are socially significant differences with respect to five or six specified qualities.

99: No basis for judging.

-99: Missing Value.

ECONEG   Negative Economic Differentials   EQN

$$ECONEG = ECDIFXX \times (ECODIFXX > 0)$$

1: Slight differentials. There are socially significant differences between the minority and the dominant group on one or two of the specified qualities (i.e., there are one or two components checked).

2: Substantial differentials. There are socially significant differences with respect to three specified qualities.

3: Major differentials. There are socially significant differences with respect to four specified qualities.

4: Extreme differentials. There are socially significant differences with respect to five or six specified qualities.

-99: Missing Value.

ETHDIFXX   Ethnic Difference Index   MAR 33

Ethnic difference index, "LANG" + "CUSTOM" + "BELIEF" + "RACE", is constructed as follows: If all "LANG", "CUSTOM", "BELIEF", and "RACE" are not coded, score "ETHDIFXX"=0. If "LANG" is coded 1, "ETHDIFXX" = +3. If "LANG" is coded 2, "ETHDIFXX" = +2. If "LANG" is coded 3, "ETHDIFXX" = +1. If "CUSTOM" is coded 1, "ETHDIFXX" = +2. When adding "BELIEF" and "RACE" into the equation for ETHDIFXX, ETHDIFXX increases by the coded values of these two variables. (eg. If "BELIEF" = 2, then ETHDIFXX = +2.)

Range: 1 – 7

-99: Missing Value.

| GC2 | Regional Base | MAR 38 |

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.

1: Yes

2: No

-99: Missing Value.

| GDPCAPK | GDP per capita, Constant USD | World Bank |

Range: 4571 – 46,777

-99: Missing Value.

| GDPCAPK_D | Change in GDP per capita | EQN |

$$GDPCAPK\_D = d.GDPCAPK$$

Range: -2610 – 1945

-99: Missing Value.

| GRPCONC | Group Concentration | EQN |

$$GRPCONC = 2 - GC2$$

Range: 0 – 1

-99: Missing Value.

LANG   Different Language Group   MAR 29

0: Unknown.

1: Group speaks same language.

2: Group speaks multiple languages.

3: Linguistic Assimilation w/ Dom. Group.

99: No basis for judgment.

-99: Missing Value.

POLITY2   Democracy Level   p4v2002

Range: -7 – 10

-99: Missing Value.

RACE   Different Physical Appearance   MAR 32

0: Unknown.

1: Physically distinguishable subtype of same racial stock.

2: Different racial stock from the dominant group with substantial inter-mixture.

3: Different racial stock, little or no intermixture.

99: No basis for judgment.

-99: Missing Value.

0: None reported.

1: Political banditry, sporadic terrorism.

2: Campaigns of terrorism.

3: Local rebellions. Armed attempts to seize power in a locale. If they prove to be the opening round in what becomes a protracted guerrilla or civil war during the year being coded, code the latter rather than local rebellion. Code declarations of independence by a minority-controlled government here.

4: Small-scale guerrilla activity. All of the following must exist: 1) fewer than 1000 armed fighters; 2) sporadic armed attacks (less than six reported per year); and 3) attacks in a small part of the area occupied by the group, or in one or two other locales.

5: Intermediate guerrilla activity. Has one or two of the defining traits of large-scale activity and one or two of the defining traits of small-scale activity.

6: Large-scale guerrilla activity. All of the following must exist: 1) more than 1000 armed fighters; 2)frequent armed attacks (more than 6 per year); and 3)attacks affecting a large part of the area occupied by the group.

7: Protracted civil war. Fought by rebel military units with base areas.

99: No basis for judgment.

-99: Missing Value.

RISKECO0   GDP per capita decline   EQN

0: GDP per capita did not drop that year.

1: GDP per capita did drop that year.

-99: Missing Value.

RISKECO1   GDP per capita growth less than 1%   EQN

0: GDP per capita grew by more than 1% that year.

1: GDP per capita did not grow by more than 1% that year.

-99: Missing Value.

RISKECO2   GDP per capita growth less than 2%   EQN

0: GDP per capita grew by more than 2% that year.

1: GDP per capita did not grow by more than 2% that year.

-99: Missing Value.

RISKGMIN   Party Orientation Change that Year   various

0: Government party orientation did not change.

1: Government orientation changed.

-99: Missing Value.

RISKGMIN_L   Party Orientation Change, next Year   EQU

0: Government party orientation did not change the next year.

1: Government orientation changed the next year.

-99: Missing Value.

RISKGMIN_D   Party Orientation Change, previous Year   EQN

0: Government party orientation did not change the previous year.

1: Government orientation changed the previous year.

-99: Missing Value.

TERR_YEAR   Use of Terrorism in the Year   various

0: No use of terror by the group that year.

1: Use of terror by the group that year.

-99: Missing Value.

TERR_PRE   Group Previous Use of Terrorism   EQN

0: No previous use of terror by the group.

1: Previous use of terror by the group.

-99: Missing Value.

TRADE   Total Trade for the State / Barbieri/Eurostat

Range: $4.95 \times 10^8 - 9.18 \times 10^{11}$

-99: Missing Value.

UNEMP   Unemployment Rate   UN

Range: $0 - 24.2$

-99: Missing Value.

UNEMP_D   Change in Unemployment Rate   EQN

Range: -3.0 – 4.3
-99: Missing Value.

URBANPCT   Urban Percent in the State   UN

Range: 44.3 – 88.9
-99: Missing Value.

YOUTHPCT   Percentage of Youth in the State   UN

Range: 11.5 – 19.2
-99: Missing Value.

Notes on Data Sources

Barbieri Trade figures for the states under investigation came from two sources. Barbieri compiled a trade database for her dissertation. The dataset is located on the Correlates of War project's website. The address is `http://cow2.la.psu.edu/`.

EQN This variable was calculated using other data and the provided equation. For sources on the component variables, see the entries for the component variables.

Eurostat Trade figures for the states under investigation came from two sources. Eurostat is the official collector of statistics for the European Union. Its website is `http://epp.eurostat.cec.eu.int/`.

MAR ## The Minorities at Risk project provided the majority of the base data utilized in this research. In fact, the minorities examined were classified as "at risk" by the Minorities at Risk project. All MAR-designated variables can be located in their codebook online. Their website is `http://www.cidcm.umd.edu/inscr/mar/`.

p4v2002 The Polity IV project resides at the University of Maryland. Its dataset can be downloaded from `http://www.cidcm.umd.edu/inscr/polity/`.

UN The United Nations collects both primary and secondary data to aid in the evaluation of their programs and of their member states. The United Nations database used in this research is the Population Information Network (POPIN) at `http://www.un.org/popin/`.

World Bank The World Bank produces economic statistics to evaluate their programs. The dataset was downloaded from their subscription site, which is located at `http://www.worldbank.org/data/onlinedatabases/`.

Vita

Ole J. Forsberg was born in Corvallis, OR on July 25, 1968. He was raised in Portland, OR and went to high school at the archdiocesan Central Catholic High School. After graduating in 1986, Mr. Forsberg attended the University of Portland, receiving a B.S. in Mathematics on Physics in 1990. He received his M.A.T. in Secondary Education from the Johns Hopkins University in Baltimore, MD in 1992.

For the next decade, Mr. Forsberg taught school in Portland: first, middle school math and science at Our Lady of Sorrows, and later math, physics, and chemistry at St. Mary's Academy in downtown Portland.

Ole is currently actively seeking his doctorate in Political Science, with a concentration in International Relations, American Politics and Government, and Quantitative Methods at the University of Tennessee in Knoxville, TN.