

The Bomber Who Calls Ahead: Terrorism, Insurgency, and the Politics of Pre-Attack Warnings

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Submitted in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy
in the Graduate School of Arts and Sciences

COLUMBIA UNIVERSITY

2015

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Abstract

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Terrorist and insurgent groups sometimes give pre-attack warnings, informing governments of the time and place of attacks before they occur. This dissertation explains why militant groups give these warnings. It also explains why governments believe these warnings and respond to them, mobilizing emergency resources and carrying out economically disruptive evacuations. Based on interviews and other historical research on the Irish Republican Army (IRA), *Euskadi Ta Askatasuna* (ETA), the Tamil Tigers, Shining Path, and Túpac Amaru Revolutionary Movement (MRTA), this dissertation argues that pre-attack warnings serve a casualty-limiting function. Militant groups give warnings when civilian casualties are politically costly for the group. Civilian casualties are especially costly for groups that depend on local populations for shelter, funding and other critical resources. These conclusions are confirmed by logit analyses of a new database of more than 3,000 bombing events. A game theoretic signaling model also predicts when governments will believe and respond to warnings. Governments respond to warnings when militants are known to warn only when attacking and the frequency of prank warnings is low. The model's predictions are confirmed by interviews of police in Northern Ireland and Spain. A novel finding is that a high frequency of pranks (false warnings emanating from individuals outside the militant group) may force militants to warn truthfully. Militants may also work with governments to create clear channels for communication, using third party intermediaries, codes, and redundant messages to set militants' warnings apart from the "noise" of pranks. This finding substantiates a game theoretic prediction that experimental methods have so far failed to validate: that increased noise may induce separating equilibria, increasing rather than decreasing the information in a signal.

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Acknowledgements

I owe many thanks to many people who supported me through the long process of writing this dissertation. I can name most of them, but some must remain anonymous for their own reasons. Of those I can name, I thank my advisors, Robert Jervis and Page Fortna, as well as my dissertation defense and proposal committee members: Severine Autesserre, Stuart Gottlieb, Austin Long, and Robert Shapiro. I thank Johannes Urpelainen and Macartan Humphreys for their advice regarding my formal model. I also thank the Department of Political Science at Columbia University for being my base and institutional support from 2009 to 2015.

For their generous financial support, I thank the Horowitz Foundation for Social Policy and the Advanced Consortium on Cooperation, Conflict, and Complexity (AC4) at the Earth Institute at Columbia University. I also thank Professor Christopher Coker and the Department of International Relations at the London School of Economics and Political Science for hosting me as a guest researcher during my fieldwork in Ireland and Great Britain.

I thank the *Coiste na nIarichimí* Republican ex-prisoners support group for making former IRA prisoners available for interviews. I also thank the Falls Road office of Sinn Féin, the Northern Ireland Retired Police Officers Association (NIRPOA), the Police Service of Northern Ireland, the Northern Ireland Policing Board, the Samaritans organization, the Department of Justice of Northern Ireland, the Irish Republican History Museum, the Royal United Services Institute, and the CAIN project at the University of Ulster.

For their special assistance in Northern Ireland, I thank Seánna Walsh, Danny Morrison, Robert McClanahan, John O'Hagan, Eamon Mallie, William Mawhinney, Jonathan Blake, Joanne Murphy, Brendan Birt, Geraldine Mc Allister, Peter Gilleece, Kevin O'Brien, Jo Black, Leanne Donly, Tim Farrell, Patrick Thomson-McQuiston, Maura Scully, and Louise Quinn. For their assistance in

Britain, I thank Jonathan Powell, Gordon Barrass, John Bew, Richard English, and Peter Neumann.

For their assistance with my research on ETA and the government of Spain, I thank Antton Etxebeste, the Guardia Civil, Urko Aiartza, the New York Euzko-Etxea, Brian Currin, Gorka Espiau, Paul Rios, Joseba Zulaika, and the Lokarri organization.

For their assistance with my research on the LTTE and Sri Lanka, I thank M.A. Sumanthiran, Jayantha Dhanapala, the British Tamils Forum, the Federation of Tamil Sangams of North America, Tamils Against Genocide, John Rogers and Ira Unamboowe of the American Institute for Sri Lankan Studies, Jehan Perera and National Peace Council of Sri Lanka, and Jayadeva Uyangoda.

For their assistance with my research in Peru, I thank Maria Cruz-Saco, Salomón Lerner Febrés, Ricardo Caro, Gustavo Gorriti, Paula Muñoz, Jean Franco Olivera, Maria Rae, Eduardo Toche, Talia Castro-Pozo, Cynthia Sanborn, Orieta Pérez, the Instituto de Democracia y Derechos Humanos, and the Centro de Información para la Memoria Colectiva y los Derechos Humanos.

I thank my research assistants for their tremendous help in producing the quantitative database for my research: David Ray Anderson, Fatima Dar, Katie Garcia, Gi Jae Han, Kangdi Li, Antoine Sander, Adefunke Sonaike, and Nidale Zouhir. I also thank my Basque and Spanish translator, Jon Lizarraga Díaz.

I thank the many academics who assisted me in obtaining IRB approval for my research: Rebekka Friedman, Diego Navarro Bonilla, Zachariah Mampilly, Xabier Irujo, Roger Mac Ginty, Richard English, Neil DeVotta, Mark Whitaker, Roland Vazquez, and Zoe Bray.

Finally, I thank my family, friends, and loved ones for the support they have given me over the past six years.

Dedication

To my grandfather, Joseph M. Valloti, the original doctor in the family, who has always inspired and supported me.

Introduction

Thousands of shoppers visit the stores in the commercial center of Manchester, England on any given Saturday. The morning of June 15, 1996 was typical in that regard. Between 75,000 and 80,000 people packed the department stores, restaurants, and other businesses in the city center, unaware of the 3,300 lb ammonium nitrate and diesel fuel bomb hidden in a red and white freight truck nearby. Elite members of the Provisional Irish Republican Army (IRA) had driven the truck into Manchester shortly after nine o'clock that morning, parking it outside the glass display windows of Marks and Spencer, one of the largest department stores in the city. The stage was set for an extraordinary bloodbath.

Then, shortly after 9:40AM, the situation changed dramatically. Police rushed to the area around Marks and Spencer and began examining vehicles. They quickly identified the truck containing the bomb, noting the suspicious wiring running from its cabin into the cargo compartment. The police rapidly evacuated the surrounding area, creating a protective no-go zone stretching a quarter mile from the truck in every direction. Police also notified the British Army's elite bomb disposal team, which arrived on the scene at 10:45AM with a remote controlled robot specifically designed to approach and defuse IRA bombs.

Despite the best efforts of the army bomb experts, the IRA truck bomb exploded at 11:17 AM. It was the largest peacetime explosion in the history of the United Kingdom. A blinding fireball and shock wave pulverized store fronts, news stands, and cars. The commercial center of Manchester was raked by flying rubble, glass, and hot metal. A black mushroom cloud rose over the city. Remarkably, however, the explosion did not kill anyone. Manchester police had worked efficiently, evacuating thousands of people from the city center, and when the bomb went off, it tore through a ghost town. Fire and ambulance crews combing the scene afterward encountered a scene of utter devastation – roughly £1 billion in physical damage. But the only bodies they found were those of the unfortunate bomb disposal robot and a number of shop mannequins that had been blown out of store windows and into the streets (BBC 2006; Harnden 1999: 248-251).

IRA attacks throughout the thirty-year Northern Ireland conflict often followed this pattern. The IRA's April 24, 1993 bombing of the Bishopsgate area of London's financial district utilized a similar bomb – 2,200 lb of explosives packed into the back of a dump truck and attached to a timer. Two IRA agents parked the truck and fled the scene undetected. But police rushed to the area within the hour, identifying the suspicious truck and commencing a massive evacuation of the Bishopsgate area. When the bomb exploded it shattered several blocks of expensive real estate – banks and office towers, primarily – causing £500 million in damage. But thanks to the intrepid work of London's Metropolitan Police, that shattered real estate was empty of people. The one fatality was an inquisitive news reporter who rushed toward the scene of the evacuation rather than away from it (Harnden 1999: 244).

In each of these cases, what could have been a massive humanitarian catastrophe was averted by police who found the bombs planted by the IRA and evacuated people before the bombs went off. But how was this possible? Why were police able to locate the devices hidden by the IRA, with enough time to move bystanders to safety?

Because the IRA told police where to look.

Immediately after parking the truck bomb in front of Marks and Spencer in downtown Manchester, members of the IRA placed phone calls to emergency hotlines and media organizations in the Manchester area. The phone calls warned of an attack underway, giving the location of the bomb, a description of the truck carrying the device, and the approximate time at which the bomb would explode. The emergency hotlines and media organizations relayed the warnings to Manchester police. With roughly ninety minutes notice, Manchester police were able to find the bomb truck, clear the surrounding area, and cordon it off so that no one would be caught in the blast. The story at Bishopsgate was similar: After parking the truck, the IRA placed nine separate phone calls, informing London police of the bomb's location and approximately when it would explode.

Police had forty-five minutes to evacuate nearby buildings and move people to safe areas (Harden 1999: 244). Why did the IRA do this? Why, after expending the effort to build a bomb and secretly transport it into the heart of an English city, would the IRA spoil the surprise by telling police about the plot?

In this dissertation, I explain why some militant groups engage in such behavior and others do not. I also answer related questions regarding the state's reaction to warning messages. First, what convinces a government to believe a warning, rather than assuming it to be a cynical hoax by militants trying to create chaos? Second, what can warnings and government responses tell us about cooperation and communication among adversaries? Militants and governments spend most of their days trying to kill or apprehend one another. How does an apparently cooperative interaction emerge, whereby militants signal their attacks ahead of time and governments use that information to save lives?

My research design incorporates formal theory, field interviews, archival research, and large-N quantitative analyses. Chapter 1 presents a review of relevant literature. Chapter 2 presents a theory to explain militants' decisions to send or not to send warnings of imminent attacks. I express this theory formally, although I save a full discussion of the formal model for a later chapter. The essence of the theory is as follows: Militants give pre-attack warnings to avoid causing civilian casualties, when those casualties are likely to be politically costly for the group. Militants also give warnings because the government's expected response – dispatching police, evacuating buildings, shutting down infrastructure, etc. – is costly to the state. Warnings serve a dual purpose, avoiding the political costs associated with excessive killing and imposing added costs on the government. When deciding whether to give warnings, a militant group weighs these benefits against the operational drawbacks of warning: an increased likelihood of the government thwarting the attack and a lower expected level of damage compared to that of a no-warning attack.

Chapter 3 presents a detailed case study of the IRA during the thirty year conflict known as “the

Troubles.” I base this case study on extensive fieldwork and first-person interviews conducted in Northern Ireland and Great Britain. I pose direct questions to IRA members about why they gave warnings to the British government. I also pose questions to police and intelligence specialists who worked to defeat the IRA – and who often found themselves on the receiving end of the IRA’s pre-attack warnings. These interviews support my theory that militant organizations warn to avoid politically costly civilian casualties and to impose additional costs on the government.

Chapter 4 presents paired case studies as additional tests of the theory. Using data collected from fieldwork in Sri Lanka, Peru, and Spain, I analyze militant groups that engaged in different warning behavior. I pair groups that were similar in major factors such as their fundamental grievances and their political goals. I then look for divergences in the variables identified as causally significant in my theory. If my theory is well specified, the differences in these groups’ warning behavior should be traceable to differences in their political costs for harming civilians and their ability to impose additional costs on the government. The first case pair comprises the Basque secessionist group, *Euskadi Ta Askatasuna* (ETA) and the Liberation Tigers of Tamil Eelam (LTTE – colloquially, the Tamil Tigers). Both groups were motivated by ethnic grievances and sought secession, but only ETA gave pre-attack warnings. The second case pair comprises *el Movimiento Revolucionario Túpac Amaru* (MRTA – the Túpac Amaru Revolutionary Movement) and *Sendero Luminoso* (the Shining Path). Both groups were motivated by revolutionary Marxism and sought the overthrow of the Peruvian government, but only the MRTA gave pre-attack warnings. Like the IRA case study, these paired, contrasting case studies show that militant groups warn to avoid politically costly casualties and to impose additional costs on the government.

Chapter 5 presents a quantitative analysis of more than 3,800 bombing incidents carried out by 37 militant groups worldwide. I identify a case universe of bombing incidents in the National Consortium for the Study of Terrorism and Responses to Terrorism (START)’s Global Terrorism Database (START 2015). I use *Lexis Nexis* searches and other historical research to determine whether the perpetrator group gave a warning before each incident. I also incorporate informa-

tion on the characteristics of militant groups and the states they fight, based on data from the Big Allied and Dangerous (BAAD) dataset and the Political Terror Scale dataset (Asal and Rethemeyer 2008b; Gibney 2015). My IRA, ETA, Tamil Tigers, Shining Path, and MRTA case studies suggest that militant groups' relative dependence on local support determines the political cost of harming civilians. I use the BAAD dataset's indicators of militant territorial control and foreign state support to measure each group's dependence on local support. I use logit regressions at the level of the individual attack to determine whether these factors predict warning behavior by the perpetrator group in each of my database's incidents. The results are consistent with the expectation that groups will give warnings when they face high costs for targeting for civilians, as determined by their lack of territorial control and their lack of foreign state patronage.

Chapter 6 turns to the analysis of communication and cooperation between militants and governments. Here I present the full version of my game theoretic model, a signaling game played by a *Militant* and a *Government*. As mentioned earlier, the model predicts pre-attack warnings when militants face high political costs for killing civilians, governments face high costs for responding to warnings, and militants sacrifice little damage by giving warnings of their attacks. The model also predicts that militants will give false warnings if they place an especially low premium on their reputation for honesty. Additionally, the model makes predictions about when governments will respond to warnings they receive. The militant group's equilibrium warning behavior is a critical determinant, as is the probability of prank warnings that cannot be distinguished from militants' messages. My model predicts that if militants warn falsely or the frequency of pranks is very high, the government will not respond – an outcome that may be suboptimal for the militant group. Governments may also fail to respond if there is low political accountability for ignoring warnings that prove to be true. I test the model's predictions using data from my IRA and ETA interviews; interviews of Irish, British, and Spanish police; and interviews of journalists who served as neutral intermediaries for communication between militants and governments. The case study evidence confirms my model's hypotheses and offers other intriguing insights about militant-government interaction. When facing a government that may not respond to warnings, a

militant group may involve the news media, passing warning messages through journalists and ensuring that the warning is “on the record” in case the government fails to respond. Militants may also work *with* governments, developing elaborate procedures to set their warnings apart from pranks. By making it very difficult for pranksters to fake a warning, militants *assist the government* in responding to credible warnings. Militants will also optimize their own false warning behavior, keeping their use of hoaxes below the threshold at which the government would no longer respond. A sufficiently high frequency of pranks (from those outside the militant group) may cause the militant group to adopt a strict policy of truthful warning.

Chapter 7 presents an extension of my research to the analysis of state behavior. Militant groups are not the only actors that give pre-attack warnings. States engage in this behavior as well, and sometimes on a grand scale. In the extensions chapter I apply my theoretical framework to explain state behavior in three cases: China’s shelling of the Taiwan Straits islands from 1958-1979, the United States’ atomic bombing of Japan in 1945, and Israel’s bomb and artillery strikes on Hamas-controlled Gaza in “Operation Cast Lead” (2008-2009) and “Operation Protective Edge” (2014). My theory explains the warning and non-warning behavior of states well in these cases. Based on my analysis I am able to make forward-looking predictions for when we are likely to see warning behavior by other states. These predictions may be tested in future research.

I summarize my conclusions in Chapter 8, discussing the broader implications of my findings for our understanding of terrorism, insurgency, interstate conflict, and cooperation among adversaries. Although pre-attack warnings are a very specific phenomenon, examining them yields general insights about violence and the politics thereof.

First, pre-attack warnings offer a window into how militants think about tactics and targeting. The bomb, by itself, is a clumsy weapon. States possess technology to make bombs “smart,” but non-state belligerents generally do not. Instead, they incorporate a particular speech act into the operational planning for their attacks. By engaging the government’s security response – essen-

tially co-opting police for militants' own purposes – warnings allow a non-state group to destroy physical property, hollow out the state's economy, and cause widespread psychological effects while killing very few people. These warnings can reduce so-called “collateral damage” to very low levels – often lower than what states cause using advanced weapons.¹ The effect of warnings is so dramatic, it should cause scholars of terrorism and insurgency to reconsider their strictly “kinetic” notion of the attack. For some militant groups, the speech act of warning is just as important as the physical building, planting, and explosion of a bomb. At the planning and execution stages, the attack is not just a physical action, but action matched with warnings and a government response – all of which combine to produce the pattern of damage and humanitarian effects.

Second, my investigation reveals how militant groups navigate their political environments. Within the academic terrorism literature, there is a striking discontinuity between research arguing that terrorists want “a lot of people watching, not a lot of people dead” (Jenkins 1975) and accounts arguing that terrorists want a lot of people dead. Scholars such as Hoffman (1997) explain this discontinuity as the difference between studying the “old terrorism” of groups like the IRA and the “new terrorism” by Islamist groups like Al Qaeda. Contrary to this account, I show that the new Islamist terrorists give warnings in certain situations where they seek to limit casualties. For instance, media reports on a 2011 Boko Haram attack on a beer hall in Borno, Nigeria quoted this eyewitness recollection:

Around 6pm we saw some leaflets warning residents about impending attack in the area and people quickly closed their shops for fear of the attack. So around 8pm the attackers came and opened fire on the beer parlour before they fled (Ibrahim 2011).

A similar report from 2013 noted that prior to a bomb and gun attack on a prison facility, “Boko Haram sent message that they will raid the prison and free their members” and residents should

¹My IRA interviewees touted the fact that their bombings caused fewer civilian casualties, bomb-for-bomb, than the United States' drone strikes against Islamist militants. Data from the Global Terrorism Database show that the IRA killed 247 people in 589 bombings of civilian targets, an average of 0.42 people killed per attack. Including the IRA's bomb attacks on military and police targets brings the total dead (civilian or otherwise) to 737 in 1,148 attacks, an average of 0.64 people killed per attack. The United States' 421 drone strikes, from 2004 through June 2015, killed between 418 and 964 civilians, an average of 0.99-2.3 civilians killed per attack (Serle and Fielding-Smith 2014; Bureau of Investigative Journalism 2014; Serle 2015).

“steer clear of the area” (Tukur 2013). My research identifies specific conditions that raise or lower militants’ costs for targeting civilians, causing a group to adopt low casualty tactics or high casualty tactics. When militants lack foreign state sponsorship or a territorial stronghold, they face high political costs for killing civilians. I show that the meaningful difference is not between old terrorism and new, religious or secular, but between politically constrained groups and relatively unconstrained groups. The former must reduce civilian casualties to meet the moral standards of local audiences. The latter are relatively unaccountable. This logic of political constraint applies equally well to “terrorist” groups like the IRA and ETA and larger groups more frequently described as “guerrillas” or “insurgents.” When explaining their tactical choices to me, IRA and ETA interviewees cited the canonical guerrilla warfare theories of Mao Zedong. My study of pre-attack warnings shows that these groups have the same moral legitimacy concerns as larger rebel groups. By demonstrating that “terrorist” and “insurgent” groups follow the same moral and political logic, I help to correct an unhelpful compartmentalization of the terrorism and guerrilla warfare literatures.

Third, my dissertation makes a unique contribution to the political science literature on cooperation among adversaries. My research shows that, despite their ongoing conflict, militants and governments may agree on the specific issue of sparing civilians from harm. If civilian deaths are politically costly for both sides, militants and governments have an incentive to cooperate toward harm reduction. My interview subjects bristle at the suggestion that they ever cooperated at all, making their behavior all the more interesting. Despite their deadly rivalry and inability to communicate directly, militants and governments built institutions together. They established elaborate procedures to ensure the credibility of warning communication. This remarkable story should encourage further research on communication and cooperation in very difficult cases, including cases where one side, as a non-state actor, lacks access to existing institutions and must build them in loose collaboration with the government it hopes to unseat.

Fourth, my discussion of false warnings makes an innovative contribution to the signaling lit-

erature. My formal model and case studies show that militants use false warnings to impose economic costs on the state. However, issuing too many false warnings may degrade the credibility of warning signal to the point where the state is no longer willing to respond. The same problem may arise if the state faces a high frequency of prank warnings emanating from individuals outside of the militant group. One may think of this situation in terms of the “signal-to-noise ratio” discussed in information theory. As in Shannon (1948)’s classic formulation, where a signal is transmitted via a “channel” subject to probabilistic noise, a higher degree of noise actually *increases* the potential information content of the signal. Game theoretic analyses suggest that such patterns should be observable in situations of strategic interaction, based on the incentives of signaling players. However, the authors have so far failed to validate these predictions in experiments (Haan and Sloof 2011). I show, theoretically and empirically, that a sufficiently high frequency of “noisy” prank warnings can induce truth-telling by militant groups that wish to avail themselves of the government’s emergency response. Beyond that, my IRA and ETA case studies show that militant groups will actually help the state to construct a channel that is as noise-free as possible. They develop institutions – phone chains, intermediaries, code words and maps – which hoax artists cannot easily access or replicate. This institutionalization is a unique finding and a much deeper form of cooperation than is anticipated in the existing literature.

1 Scope and Relation to Existing Literature

My study draws upon and contributes to several sub-literatures within the academic writing on armed conflict. Most obviously, my research relates to the literature on terrorism and insurgency. These forms of violence have never been adequately distinguished, and I will not distinguish them here. I am concerned with bombings of non-military targets by non-state actors (and in my extensions chapter, state actors). I refer to the non-state perpetrators of the attacks only as “militants,” because my specific subject, the pre-attack warning, stakes out a gray area where terrorism and insurgency, terrorists and insurgents, cannot be distinguished – at least not without making strong normative assumptions I do not care to make.

The perpetrators of these attacks argue that warnings *differentiate* their actions from terrorism by ensuring that civilians are not harmed. Governments argue that these attacks are terrorism because the targets are non-military – or because non-state conflict actors are by definition terrorist. I examine these arguments and their foundations in this section, not because I can resolve the disagreement, but because the disagreement itself highlights an important contribution of my study. My analysis of warnings shows that terrorism and insurgency cannot be understood except by combining insights from the often compartmentalized terrorism and insurgency literatures.

1.1 Scope

The IRA attacks described in the introduction helped to inspire my investigation. The investigation itself is concerned with bombings of civilian targets by non-state actors. This mode of violence fits comfortably within the domain of “terrorism,” by most accounts. I seek to challenge those accounts, but first it makes sense to survey them briefly.

Terrorism, in the classic understanding, is a form of communication. Hoffman (1998: 43-44) describes it as a violent act, “designed to have far-reaching psychological effects beyond the immediate victim or object.” As Jenkins (1974: 4) puts it: “Terrorism is aimed at the people watching, not at the actual victims. Terrorism is theater.” Although scholars and policymakers generally agree

about terrorism's communicative nature, they agree about little else. Schmid and Jongman (1988: 5-6) famously count 109 extant definitions of terrorism, each making slightly different claims. One point of disagreement concerns the issue of targeting: Does terrorism necessarily involve violence against civilians? The use of a special term, "terrorism" suggests that the action is different from narrowly military violence, which aims to destroy or degrade the state's capabilities for self-defense and internal policing. The US Department of State, for instance, defines terrorism as "politically motivated violence perpetrated against noncombatant targets by subnational groups or clandestine agents, usually intended to influence an audience" (US State Department 2001). This definition is generally in line with the conventional wisdom that terrorism is politically "aimed" (Jenkins's words) at someone other than the immediate victim. Nonetheless, a 2003 clarification by the State Department reinterprets the term "noncombatant" to include "military personnel who at the time of the incident are unarmed and/or not on duty" and "military installations or ... armed military personnel when a state of military hostilities does not exist at the site" (US State Department 2003: xii).

The May 22, 2013 killing of British Army Fusilier Drummer Lee Rigby is one example of terrorism committed against military targets: Two professed Muslims ran Rigby down with a car on a London street, hacking him to death with cleavers and encouraging bystanders to film the act with their camera phones. One of the men gave a statement to these cameras, asserting that "Muslims are dying daily by British soldiers" like Rigby, and Britain should "leave our lands" if its citizens want to "live in peace" (*Daily Telegraph* 2013). Incorporating attacks on military personnel allows us to recognize Rigby's killing for the propaganda statement that it was. On the other hand, including such attacks suggests a more general equivalency between targeting civilians and targeting military personnel not on combat duty, if some psychological or symbolic aspect of such an action can be identified.

Another controversy is more fundamental: Does terrorism require the targeting of people at all? For instance, United Nations Security Council Resolution 1566 (2004) defines terrorism as an act

“committed with the intent to cause death or serious bodily injury, or taking of hostages.” US law is more general. 18 U.S.C. §2331 specifies first and foremost that terrorism involves “acts dangerous to human life,” although various amendments, including USA PATRIOT Act provisions, expand the definition to encompass property destruction and computer crime, among other offenses (AZDEMA n.d.). Such a definition produces peculiar results. Within the US, for instance, law enforcement officials recognize a special category of “ecoterrorism,” which includes non-injurious “sabotage and property destruction against industries.” According to the US Federal Bureau of Investigation, ecoterrorism includes “tree spiking (insertion of metal or ceramic spikes in trees in an effort to damage saws) . . . arson, sabotage of logging or construction equipment, and other types of property destruction” (Jarboe 2002). The destruction of property may be psychologically distressing to the owner and may serve a coercive purpose, but should the definition of terrorism be broadened so far? Should terrorism be defined to include acts that are deliberately non-injurious?

This question is fundamental to my study of pre-attack warnings. If terrorism must involve “the intent to cause death or serious bodily injury,” as in the UN definition cited above, then pre-attack warnings exempt non-injurious bombings from the category of terrorism. This is the view of my IRA and ETA interviewees, who argue that their violence should be viewed as economic coercion by destruction of the state’s resources – insurgency perhaps, but not terrorism. Adopting an expansive definition that includes property destruction, bombings with warnings are still terrorism, regardless of whether the attack was intended to cause injury. Attacks with warning occupy a typological gray area. Their inclusion or exclusion from terrorism study depends on one’s view of property. Either we admit deliberately non-injurious property destruction (including “ecoterrorism”) or we accept that a terrorist attack becomes insurgency based on a ten second warning call to police.

Analysts and policymakers may seek clarity by defining terrorism according to the type of actor involved. Hoffman (2006: 35-36) distinguishes “terrorists” as actors who “do not function in the open as armed units, generally do not attempt to seize or hold territory, deliberately avoid engag-

ing enemy military forces in combat, [and] are constrained both numerically and logistically from undertaking concerted mass political mobilization efforts." "Guerrilla" actors are "numerically larger," capable of attacking the state's military forces and at times governing territory. "Insurgent" actors are even larger, and capable of matching their violence with "informational ... and psychological warfare efforts designed to mobilize popular support." Hoffman acknowledges, however, that "guerrillas and insurgents often employ the same tactics" (such as bombing public places) "to intimidate or coerce, thereby affecting behavior through the arousal of fear." The difference between a terrorist and an insurgent is not that one carries out symbolic, frightening violence and the other does not. The terrorist just belongs to a smaller, more primitive group.

Sánchez-Cuenca and de la Calle (2009: 32) make a similar argument, defining terrorism as "violence carried out by underground organizations that are not powerful enough to take *de facto* control of part of the state's territory." Any violence by such a group qualifies as terrorism, even banal actions such as bank robbery. The authors adopt this position because defining terrorism in the "action-sense" is not especially useful:

[T]he distinction between the target of violence and the audience target is not specific to terrorism. This is, in fact, a generic element of all forms of coercion and can be found in many instances of warfare behavior that are not usually regarded as terrorism ... For instance, the two atomic bombs on Hiroshima and Nagasaki were a pure case of coercion against the Japanese government: the civilians attacked were not the audience target (Sánchez-Cuenca and de la Calle 2009: 33).

Sánchez-Cuenca and de la Calle reference the atomic bombings, which I also discuss in Chapter 7, *Extensions to State Behavior*. The bombings are discussed by Schelling (1966: 17) as well. He describes them as "weapons of terror and shock. ... The political target of the bomb was not the dead of Hiroshima or the factories they worked in, but the survivors in Tokyo."

State terrorism is an important subject that is difficult to discuss because of how we define terms. US government definitions (for instance that of the State Department) describe terrorism as the action of "subnational groups or clandestine agents." Despite the well-known disagreements over the meaning of terrorism, influential studies revert to government definitions as a default (Hoff-

man 2006) and use the State Department's list of Foreign Terrorist Organizations to define the universe of cases for study (Abrahms 2006, 2008). There is nothing inherently wrong with using government definitions, but it is important to consider where they came from.

Terrorism, in the original sense, was a state practice: the public execution of those perceived as hostile to the French Revolution. Writing in 1793, Maximilien Robespierre argued: "Terror is nothing more than speedy, severe and inflexible justice ... a consequence of the general principle of democracy" (Robespierre 1794).² Foucault would argue that justice in established states is not that different. The incarceration or torture of law breakers is an intentionally symbolic act, "affirming the dissymmetry of forces" between state and citizens who might otherwise defy it (Foucault 1995: 55). States also "affirm the dissymmetry of forces" in wartime attacks on civilians. According to Schelling (1966: 15), the "terror and shock" embodied in the atomic bombings was not unusual: "The two bombs were in the tradition of Sheridan against the Comanches and Sherman in Georgia."

Although my primary focus is non-state actors' behavior, the issue of state terror is important to my study in two ways. First, it is an independent variable. My interview subjects identify state abuses – political incarceration, torture, extrajudicial killing, and legal execution – as key factors defining the domestic political climate. When the government terrorizes civilians for political purposes, anti-government militants find it easier to justify their own targeting of civilians. Local populations conditioned by government terror may accept a higher level of abuse by non-state groups claiming to represent a better alternative. The political cost for inhumanity is lower, and the frequency of pre-attack warnings is lower, when the state is engaged in terror at home.

Second, state terrorism is the analog of non-state terrorism in Chapter 7, where I extend my theory to the analysis of government behavior. "Terror" comes up in two cases, the atomic bombing

²Original French: *La terreur n'est autre chose que la justice prompte, sévère, inflexible; elle est donc une émanation de la vertu; elle est moins un principe particulier qu'une conséquence du principe général de la démocratie appliqué aux plus pressants besoins de la patrie.*

of Japan and Israel's bombings in Hamas-controlled Gaza. In these cases, a state actor confronts the choice that non-state militant groups face when deciding whether to give warnings. Should they attack with surprise, destroying a target but also killing civilians? Or is the political cost of indiscriminate violence so high that the state should give a warning before dropping bombs? In the case of Israel, the stigma of "terror" was especially damaging because the opposing side in the conflict was Hamas and Israel's international appeals (primarily to American supporters) are based on the notion that Israel's *enemies* use terrorism and Israel does not.

Because terror is employed by a diversity of actors, it makes sense to reject "actor-sense" definitions of terrorism. Sánchez-Cuenca and de la Calle (2009) make their best case for actor-sense definitions on the grounds of clarity and parsimony: all violence by an "underground" actor is terrorism. Assuming we can determine a group's size and capacity for territorial control, we need not debate the defining qualities of terrorist violence. However, the same parsimonious logic undercuts the rationale for defining terrorism as a unique term. In Sánchez-Cuenca and de la Calle's construction, "underground organizations" are synonymous with "terrorist organizations," so a new term is unnecessary and confusing. It suggests that there is something unique and terrifying about underground organizations' violence, even though the "actor-sense" definition subsumes such mundane acts as robbing a cashier. It also makes it more difficult to discuss tactical and political commonalities between the violence of underground groups and violence by insurgent and state actors.

If anything, a definition of terrorism should operate in the "action-sense," allowing for the division of terrorism into state- and non-state varieties as a scope condition. It should incorporate the broadly accepted notion that some violence is symbolic in nature, intended to influence a third party audience. It should also specify that terrorism is intended to produce psychological terror. It is not merely "propaganda by the deed," in the words of 19th Century anarchists (Pisacane 2005; Brousse 2005) but propaganda by intimidation. Attacks on military personnel or physical property may produce terror, and should not be excluded. A more challenging question is how

to treat non-injurious acts. Taylor (1998) and Asal and Rethemeyer (2008a) debate this in an enlightening disagreement over ecoterrorism. This debate is relevant to my study, because of the casualty-reducing power of pre-attack warnings. Compared to an environmentalist's tree spiking, bombings are more likely to cause injury and terror, and this may be the actor's intent. But my IRA and ETA interviewees argue that they gave warnings specifically to *prevent* injuries. Giving warnings, despite the risk of spoiling an attack, may demonstrate the intent *not* to injure. Warnings are, in the words of one former Northern Ireland police officer, a "risk-management" strategy to avoid "collateral damage" during "economic bombings." Viewed this way, "terrorist" attacks with warning are qualitatively similar to the wartime practices of states. Again, we need to revert to problematic actor-sense definitions to define a subject and universe of cases for study.

Considering attacks with warning, defining terrorism is a circular exercise. In defining my case universe, I specify only that I am interested in violence by non-state actors against non-military targets. (I consider state violence as an extension, in Chapter 7.) I am particularly interested in violence using bombs, because this is the primary mode of violence in which we see perpetrators give pre-attack warnings. This case universe includes many acts that fit canonical definitions of terrorism. It also contains attacks that might be construed as insurgency, and attacks by organizations that might be called guerrillas, rebels, or terrorists, depending on which actor-sense definition one chooses. I use the generic term "militants" to describe my actors of interest because the term is both general, and clear in identifying the actors as non-state.

Eschewing classifications allows me to consider non-state actors' bomb attacks from two perspectives. By bringing theories of terrorism and theories of insurgency to bear simultaneously, I increase the explanatory power of my study. I show that theories of terrorism as signaling and theories of insurgency as military-style violence do not adequately explain the behavior of the actors in my study. Jointly, however, these theories produce a great deal of insight. Taking a broad stance also increases my scholarly contribution, delivering new insights to both the terrorism and insurgency literatures.

1.2 Contributions to the Terrorism Literature

I draw most extensively from the literature conceptualizing terrorism as communication: “theater” according to Jenkins (1974: 4); violence committed for its “psychological effects,” according to Hoffman (1998: 43-44). I also draw upon the literature conceiving terrorism as rational political behavior (Crenshaw 1998) rather than psychologically disordered behavior (Post 1998). The two are not mutually exclusive, but my study, and particularly my game theoretic framework, begin with the assumption of basic cost-benefit logic and deductive rationality on the part of the actors.

Scholars operating within this rationalist framework identify various strategies by which terrorists seek to achieve their political goals. Kydd and Walter (2006) describe terrorist actions as “costly signaling” – the demonstration of resolve and capability to do harm and risk government retaliation. Terrorists may use violence to pursue five political strategies: “attrition” of the state’s resources; “intimidation” of the population; “provocation” of state overreaction; “spoiling” peace processes; and “outbidding” rival groups for public support. Formal theorists have modeled some of these strategies. Lapan and Sandler (1993) elaborate on how terrorism signals the perpetrator’s resources and capabilities. Overgaard (1994) discusses how the signaling of capabilities influences the government’s level of retaliation. Arce and Sandler (2007) discuss how signaling the group’s level of militancy influences the government’s decision on which targets to protect. Ginkel and Smith (1999) discuss how signaling the group’s willingness to suffer government retaliation influences the public’s willingness to support the group. Using qualitative methods, Hoffman and McCormick (2004) argue that terrorists communicate resolve by selecting suicide attack as a tactic.

Most relevant to my investigation, however, is Arce and Sandler (2009)’s work showing how the use of indiscriminate violence may decrease terrorists’ support among their own constituency. My formal model considers the choice of tactics within regard to several cost and benefit parameters. Benefits consist of the physical and economic damage a group may inflict on the state with surprise attacks versus attacks with warning. The militant group also considers the political cost of engaging in indiscriminate attacks (the issue discussed by Arce and Sandler). By considering

a diverse profile of costs and benefits, my work offers a comprehensive treatment of militants' decision-making, and a number of testable hypotheses.

My project also contributes to a growing literature on terrorism responsibility claims. Abrahms (2006), Bloom (2004), Pape (2003), and Hoffman (2010) argue that *ex post* responsibility claims amplify the signaling value of terrorist attacks by clearly associating the attack with its author. Warnings, because they typically identify the organization or person responsible, may be seen as responsibility claims issued *in advance*. In fact, warnings are the most credible type of responsibility claim. Barring a catastrophic counterintelligence failure by the perpetrator group, it is very unlikely that anyone outside the organization would know enough to claim the attack in advance. Warnings allow the perpetrator to lay sole claim and derive the maximum signaling benefit from the attack. I develop this insight in Chapter 6, through interviews of former counter-terrorism police in Northern Ireland. I show that the IRA used pre-attack warnings to prove its responsibility for attacks, and also to show that the group's central leadership had fully authorized each attack. This was not the primary purpose of the IRA's warnings, but these police accounts lend support to the above authors' arguments about *ex post* claims.

Abrahms (2006) also identifies a separate function of *ex post* claims. By offering the perpetrator a chance to explain its demands, responsibility claims prevent the public from overestimating the group's demands based on its apparently extreme methods. My research suggests that *ex ante* warnings may serve a similar function by making militants' methods seem less extreme. By reducing casualties, the perpetrator shows that it will not engage in butchery, that it respects civilians, and (depending on how one classifies property destruction) that the group does not actually engage in terror.

1.3 Contributions to the Insurgency Literature

My study of pre-attack warnings also makes important contributions to the literature on guerrilla war and insurgency, two terms often used interchangeably. I argue that the casualty-reducing

function of pre-attack warnings demonstrates the perpetrator group's respect for the civilian population. By giving warnings, militants show that they are morally legitimate advocates for the public they claim to represent.

A number of authors have noted the importance of discrimination in targeting, if militants are to earn the support of local populations and the legitimacy to govern once they overthrow the current regime. Lomperis (1996: 32-35) describes insurgency as a "war for the right to govern." Unable to overthrow the government immediately, insurgents must undermine the state's appearance of legitimacy. Insurgents face a difficult balancing act, needing to use force against the state while simultaneously showing that the state's use of force is *not* legitimate. Choosing the right tactics is essential because insurgents are physically weaker than the state and cannot afford to lose the battle for legitimacy.

The perception of legitimacy is critical for several reasons. It convinces people to join the insurgent group's military forces, to donate money, to allow the group to use their homes and land, and to provide the group with information. Especially in geographic areas they do not control, insurgents depend on the local population to identify government spies and other agents for execution. Such "denunciation" may be obtained through bribery, the exploitation of community disputes, intimidation, or by cultivating the local population's political loyalty (Kalyvas 2006: 178). The latter elicits spontaneous denunciations, community policing of sorts, by local people. Round-the-clock citizen vigilance is an effective means of identifying state agents, but the militant group must obtain it by demonstrating its legitimacy over that of the government.

The same challenge persists even for militant groups that control territory. Material support, recruits, and denunciation may be obtained by coercion, but there are limits to how much coercion local people will tolerate. At any rate, loyal populations volunteer the same benefits willingly. It may be cost effective for militants to rule with restraint, not an iron fist. As Mampilly (2011: 52) argues, "Terror can stifle opposition but cannot engender loyalty and support from the civilian

population.”

However, civilians’ loyalty may be less important for insurgent groups that have territory and material resources of their own. Weinstein (2006) argues that rebels’ greater or lesser degree of brutality toward civilians follows from their different access to material endowments such as diamonds or drugs. Groups with these endowments can recruit by bribery, rather than political appeal. Their forces will be mercenaries rather than ideologues. They will be less restrained toward civilians, and group leaders will have less reason to care about how this affects community opinion. On the other hand, groups without material endowments must ask the public for support, ensuring that their use of force spares the innocent and does not alienate civilians.

The smaller groups I interviewed for this project, the IRA and ETA, behaved like resource-poor rebels. These groups lacked access to diamonds, drugs, territory, or substantial support from foreign states. When asked directly, they explain their own tactical choices with references to theories of guerrilla warfare typically applied in the analysis of insurgent groups. Nearly all IRA and ETA interviewees referenced this specific passage from Mao Zedong’s *On Guerrilla Warfare*, explaining the relationship between the population and the guerrilla:

The former may be likened to water and the latter to the fish who inhabit it. ... It is only undisciplined troops who make the people their enemies and who, like the fish out of its native element, cannot live (Mao 1989).

The IRA and ETA also explain their pre-attack bomb warnings with reference to community social norms. The larger, territorially endowed groups in my study behaved in a much less restrained fashion, using indiscriminate violence for communicative (i.e. “terrorist”) purposes. This is the reverse of what Sánchez-Cuenca and de la Calle (2009) predict in their study of the same groups, based on the assumption that “underground” groups are less accountable, owing to their smaller size and lesser material needs.

In general, my findings defy expectations for how militant organizations will behave, based on

the terrorism or guerrilla literature alone. This shows the importance of considering both stylized types jointly. Canonical “terrorist” groups like the IRA and ETA cite guerrilla theory in explaining their actions, and larger “insurgent” actors engage in more terroristic violence. To understand these groups and test each literature’s assertions, we do best by pooling the cases and theories.

1.4 Contributions to the Signaling and Cooperation Literature

My study of warnings also contributes to the literature on signaling and cooperation. Warnings only reduce casualties if governments believe the messages and respond by evacuating civilians. Looking at the bombing incidents described earlier, IRA and British interactions can be retold as a story of communication and cooperation between mortal adversaries.

Militants and their adversary states disagree over the most fundamental political question: Who has the right to govern? Their interests may not be entirely opposed, however. Cooperation theorists argue that outside of pure deadlock or pure harmony situations, states can realize common goals by adjusting their behavior to accommodate others’ preferences (Axelrod and Keohane 1985; Oye 1985). In the London and Manchester bomb attacks, the IRA planted bombs to damage the British economy. However, the group also sought to minimize civilian casualties, something it could not do unilaterally. By giving warnings, the IRA enlisted police’s help in minimizing casualties (an issue on which they agreed) at the price of granting police some additional chance of thwarting the attack.

Cooperation does not enact itself, however. Its feasibility varies with the structure of actors’ preferences, and it is exceptionally difficult when actors’ payoffs resemble a Prisoner’s Dilemma. Mutual cooperation is desirable, but each actor receives a better payoff by defecting unilaterally. The sucker’s payoff in matters of war and peace is death, making cooperation exceptionally difficult to achieve in this area (Grieco 1993). Pre-attack warnings take place in a similarly difficult setting. The IRA and ETA sometimes took advantage of police, giving false warnings to draw police into ambushes or to induce costly evacuations when no bomb had been planted. Police also had

the ability to ignore warnings strategically, imposing political costs on the militants by allowing civilians to die. Yet on many occasions, the two sides passed up the opportunity to impose the sucker's payoff on one another. My study contributes to previous work identifying conditions for cooperation in situations of conflict and vulnerability.

Conflict scholars have analyzed the prospects for cooperation in difficult areas such as nuclear arms control (Schelling and Halperin 1961; Jervis 1978, 1988). Several factors facilitate cooperative outcomes. Repeated interaction may help. Defection is rational in a single encounter, but cooperation may yield a better payoff if actors expect to interact in the future (Axelrod 1984). Issue linkage and reputation also matter. Defection on an agreement in one area is less profitable if doing so prevents one from achieving desirable agreements in other areas (Keohane 1984). However, reassurance may be the best remedy. In a single or repeated interaction scenario, the prospects for cooperation are far better if payoffs resemble a Stag Hunt or Coordination game Snidal (1993). The challenge, then, is assuring the other player about one's payoffs and preference to cooperate.

Diplomacy is the traditional means of conveying such information and collecting information about other states' preferences (Bull 1977). The problem is that talk is cheap. Farrell and Rabin (1996) show formally that "cheap talk" (communication where lying carries no cost) will only convey information when states' incentives are compatible, at least in part. If the point is to reassure the other actor about one's preferences (or if the other fundamentally misperceives one's preferences) talk may not help (Jervis 1976). Bew and Gurruchaga (2009) undertake an empirical investigation of governments' attempts to negotiate with the Irish Republican Army and ETA. (One of my interview subjects, Antton Etxebeste, was ETA's lead negotiator during some of these talks.) The authors find what cheap talk theory would predict: negotiations are not especially useful, and long-term preference convergence explains the agreements that conflict actors do achieve.

There are alternatives to cheap talk, however. Scholars of international conflict have developed a rich literature on signaling, the indirect communication of information through signs and symbols

(Schelling 1966; Jervis 1970; Schultz 1998). Some signals take on meaning by repetition. Axelrod (1984) describes the evolution of cooperation in the trenches of the First World War, where subordinate troops on both sides used off-target rifle shots to initiate unauthorized ceasefires. Other signals carry a cost that will be paid if the sender fails to follow through on a promise. Reputation costs are one example. If leaders care about the credibility of their promises and threats in the future, they perceive a cost to breaking promises today and incurring a reputation for dishonesty (Guisinger and Smith 2002; Sartori 2002). My research offers support for costly signaling theories that emphasize reputation. My interviews of the IRA and ETA show that these organizations did care about the credibility of their warning messages. The IRA refrained from giving false warnings much of the time (and ETA refrained always), because warning falsely decreased the government's trust and willingness to conduct evacuations later. The IRA also linked the credibility of its warning messages to the credibility of its peace overtures, using a single system of code words to authenticate warnings and diplomatic communications to the British government.

My research also advances "audience cost" theories of signaling, albeit in an unexpected way. Fearon (1994) argues that leaders can enhance the credibility of signals by sending them publicly. Leaders leverage their accountability so that failing to fulfill promises carries domestic political repercussions. Empirical scholars question audience cost theory, arguing that audiences may not have the capacity or will to impose costs (Weeks 2008; Snyder and Borghard 2011) and that costs can never be observed if leaders follow the theory's predictions (Schultz 2001). My interviews of ETA and the IRA show that these groups leveraged public accountability, but that *of the receiving party*. The IRA and ETA made their warnings public, not to increase their own credibility, but to ensure that police would suffer political costs if they ignored or failed to respond to warnings in a timely fashion. My findings show that communicating publicly can facilitate cooperation, by allowing the sender of a signal to impose costs on a receiver who fails to cooperate. Interpreting the IRA and ETA cases more cynically, one may also view their public warnings as a type of coercion. By shifting the blame for casualties onto the government, pre-attack warnings may force the government to respond to warnings it would otherwise ignore.

2 Theory and Research Design

By combining insights from several theoretical perspectives, I seek to explain why some militant groups give warnings before their attacks. This behavior is perplexing because it defies our conventional expectation that conflict actors will attack with surprise. Whether militants are carrying out symbolic or military-style violence, what possible benefit is there in issuing a warning? Doing so enhances the government's ability to mitigate the damage from an attack and possibly to thwart it by locating and defusing the bomb. To carry out a psychologically or militarily effective campaign, a militant group must be able to carry out its attacks a high proportion of the time. Why jeopardize the success of one's own attacks? In crasser terms, isn't the point of an attack to break things and hurt people? Why go to the trouble of planning a clandestine action, only to tip the government off as you are about to carry it out?

Turning this question around and looking at it from the state's perspective, why would a government believe a pre-attack warning offered by a militant organization? It seems, *prima facie*, that any group that issues an advance warning is not truly committed to carrying out the attack. A group or individual interested in creating hoaxes might issue false warnings, hoping to induce police mobilizations and cause economic disruption. But an organization with the means and intent to carry out propaganda of the deed seems only to hurt its cause by sending warnings and giving up the advantage of surprise. How then, can a warning ever be trusted?

2.1 The Logic of Advance Warnings

These puzzles notwithstanding, we do see some militants issue warnings before their attacks. Target states sometimes react to these warnings, mobilizing emergency resources and issuing public alarms to their citizens. The results can be quite striking, as in the IRA attacks described above: tremendous damage to property and economic productivity, but comparatively little harm to people. IRA attacks like those at Manchester and Bishopsgate bear little resemblance to the mass casualty attacks one associates with groups like Al Qa'ida. They look more like a strategic campaign against economic targets, but with even less collateral damage than one expects from state

tactics such as aerial bombing. The reduction of casualties stands out as the most distinctive effect of the IRA's pre-attack warnings, and it stands to reason that this may be the purpose of the warning tactic. There is a basis to suspect this, based on the guerrilla warfare literature referenced earlier (Lomperis 1996; Mampilly 2011; Weinstein 2006) and even some of the terrorism literature (Arce and Sandler 2009). If the perpetrator group hopes to present itself as a credible alternative to the government, an advocate for its people and their rights, the group may prefer low-casualty tactics. I base my theoretical model on an assumption that militants give pre-attack warnings to mobilize a government response and achieve the dramatic casualty reduction seen in the IRA's Manchester and Bishopsgate bombings. I make several other assumptions based on a quick examination of those IRA attacks.

First, militants may use warnings to drain the treasury and economy of the target state. In the Manchester and Bishopsgate examples, British police evacuated large areas of economically productive cities. On a busy day, such interventions cost millions of pounds (or dollars) in lost productivity. The interventions may also cost government security forces directly – as when the bomb disposal team lost its high tech robot, or in cases where security personnel are themselves harmed in the blast. Mobilizing is expensive, a fact known to both militants and their targets.

Second, warnings are expensive operationally for the attacking group. Considering the Manchester example, police used the advance notice provided by the IRA's warning to bring in the British army's bomb disposal team. The army and its robot had thirty minutes of time on scene to attempt to defuse the bomb. It was not inconceivable that the army bomb squad would succeed. There is also the obvious reduction in human damage, and to a lesser extent the reduction of physical damage – by pre-positioning fire crews, moving cars away, etc. – that the government can accomplish with the advance notice afforded by the warning. Militants must weigh the operational cost of warning against the benefits.

Third, I note that people may give warnings even when they are not attacking. As most people

who attended large secondary schools or universities can attest, pranksters give false warnings – for entertainment, to get the day off, or to antagonize people they dislike. Political groups like the IRA can themselves give false warnings, hoping to sow fear or cause economic harm “on the cheap.” Police rarely see the person making a threat, and must decide how to respond without knowing whether or not the threat is real. I structure my model around an assumption that governments form probabilistic beliefs upon receiving warning messages. They decide how to respond to warnings based on those probabilistic beliefs, the cost of mobilizing, and the expected damage they may avoid by responding to warnings that are true.

Based on these assumptions, I specify a game theoretic signaling model of warnings and responses, played by a *Militant* and a *Government*. As a signaling model, the game also features a non-strategic player, *Nature*, which determines the *Militant*'s type to be “attacking” or “not attacking” at the particular moment the game is played. The *Militant*, which may or may not be carrying out an attack at that moment, decides whether to send a warning or give a default signal of no warning. The *Government* observes the signal, but it cannot directly observe the *Militant*'s type and must therefore attempt to infer whether an attack is underway. Based on the received signal, the expected signaling behavior of attacking and non-attacking *Militants*, its prior belief about the probability of attacks, and the probability of random prank warnings, the *Government* decides whether to mobilize to reduce the damage from any attack currently underway.

I leave a full description and solution of the game until Chapter 6, in which I discuss the communicative interaction between militants and governments. In Chapters 2-5, I am primarily concerned with the militant group's incentive to give warnings in the first place. I present a summary of the model's assumptions and predictions about militant warning behavior here. The logic is intuitive, but those who are interested in seeing the full equilibrium description may refer to it in Chapter 6.

Fundamentally, the *Militant* group decides whether to warn based on its type and payoff structure,

and the expected response of the *Government* to a warning or non-warning signal. For attacking *Militants* facing a *Government* that would respond to warnings (and not to non-warnings), the condition for warning is $D_2 + G > D_1 - X$, or equivalently:

$$X + G > D_1 - D_2$$

D_1 and D_2 are the expected damage from surprise attacks and attacks with warning, respectively (with $D_1 > D_2$). X is the *Militant's* political cost for causing excessive casualties in surprise attacks, and G is the lost utility the *Government* incurs (and the *Militant* group gains) when the *Government* responds to a warning. Three basic insights follow from this condition, yielding testable hypotheses of the model. First, the *Militant* has greater incentive to give a warning when it faces a higher political cost (X) for causing excessive casualties. Second, the *Militant* has greater incentive to give a warning when mobilizing carries a higher cost (G) for the *Government*. Note that either a high value of X or a high value of G could justify a warning, so a *Militant* with no political costs for causing excessive casualties or no ability to impose costs on the *Government* might still give a warning. Third, the utility of giving a warning must be balanced against the reduction in expected damage from an attack ($D_1 - D_2$) if the *Militant* gives a warning and the *Government* responds. This reduction in damage can be thought of as the operational cost of giving a warning. At higher levels, this cost will deter *Militants* from giving warnings. We can phrase these implications of the model as testable hypotheses:

H1: *Militants are more likely to give warnings when they pay a high political cost for causing excessive civilian casualties.*

H2: *Militants are more likely to give warnings when responding to warnings carries a high cost for the government.*

H3: *Militants are more likely to give warnings when doing so does not greatly reduce the expected damage from an attack.*

The model also produces predictions related to the behavior of non-attacking *Militants* and the *Government*. Those are explained fully in Chapter 6.

My strategy for testing the first three hypotheses is as follows. First, I present a detailed case study of the IRA, based on my interviews of former IRA members and Northern Ireland police. My theory is based on observations about two IRA bombings in England. The IRA carried out thousands of bombings in Britain and Northern Ireland, however. As the first test of my theory, I investigate the broader universe of cases from the Northern Ireland conflict. I interview former combatants there, posing direct questions to former IRA members about why the organization gave pre-attack warnings, whether it always gave them, and how the IRA would have fared politically had it not given pre-attack warnings. In addition, I consider accounts offered by former police, the other side of the conflict (and the recipients of the IRA's pre-attack warnings). I augment this information with interviews of former political figures, journalists, and civil society members in Northern Ireland. Some of these people participated in the warning-and-response interaction themselves, by serving as neutral intermediaries to convey warning messages from the IRA to police. I use all of this information to determine whether the IRA's behavior followed from the strategic logic specified in my theory.

As the next test of my theory, I present two pairs of contrasting case studies based on additional fieldwork I conducted in Sri Lanka, Peru, and Spain. There are hundreds of militant groups to consider worldwide. To maximize inferential leverage, I pair case studies of apparently similar groups that engaged in divergent warning behavior. This method, discussed in King, Keohane, and Verba (1994) and Van Evera (1997), allows me to examine variation on my dependent variable (warning) while controlling for major variables that would render comparisons invalid. For instance, to identify the cause of warning behavior, one gains little leverage by comparing a non-warning Maoist insurgency to an ethnic secessionist group that gave warnings. With several important factors varying across the cases, we cannot determine which factors cause the behavior of interest. By

selecting cases to control for major factors such as a militant group's fundamental grievance and specific political goal, I narrow the list of potential explanations for divergent warning behavior in each case pair. If my theory is well-specified, the difference in warning behavior will be traceable to variation in political incentives identified as theoretically significant in my model. My first case pair comprises the Basque secessionist group, *Euskadi Ta Askatasuna* (ETA) and the Liberation Tigers of Tamil Eelam (LTTE - colloquially, the Tamil Tigers). Both groups were motivated by ethnic grievances and both sought secession from an existing state. Despite these broad similarities, only ETA gave pre-attack warnings. The second case pair comprises *el Movimiento Revolucionario Túpac Amaru* (MRTA - the Túpac Amaru Revolutionary Movement) and *Sendero Luminoso* (the Shining Path). Both groups were motivated by revolutionary Marxism, and both sought to overthrow the Peruvian government at roughly the same time. Despite these groups' similarities, only the MRTA gave pre-attack warnings.

Having tested my theory qualitatively in these cases, I move to quantitative tests. A quantitative analysis allows me to examine many more groups than I can with case study methods alone. The IRA, ETA, LTTE, MRTA, and Shining Path collectively accounted for 4,134 bombings of civilian targets – roughly ten percent of the civilian target bombings listed in the Global Terrorism Database during the years 1970-2012.³ This is a substantial cross section of violence, but there are dozens more groups to consider, and my qualitative case studies cannot even consider the full universe of bombings carried out by each group. A quantitative analysis allows me to consider simultaneously all of the attacks by these groups, allowing for the fact that there is no such thing as a “warning group” or a “non-warning group.” There are only groups that warn some of the time, depending on the specifics of the attack. A quantitative analysis at the attack level has the virtue of examining variation in violence across groups and also variation in the violence committed by each group.

³Search URL: http://www.start.umd.edu/gtd/search/Results.aspx?chart=perpetrator&casualties_type=b&casualties_max=&start_yearonly=1970&end_yearonly=2012&dtp2=all&attack=3&target=5,6,1,8,9,7,2,10,11,12,13,14,15,16,17,18,19,21,22

I focus my quantitative analysis on testing on Hypothesis 1, that militants are more likely to give warnings when they pay a high political cost for causing excessive civilian casualties. I use insights from my case study interviews to operationalize and measure the concept of *political cost*. Based on the statements of conflict participants and observers, I identify three factors that contributed to the political cost of targeting civilians: dependence on local populations for support, the human rights behavior of the group's state target, and the expansiveness of the group's political goals. I also use the quantitative analysis to test alternative theories about the role of religion, geographic region, and the use of suicide bombing as a tactic. Finally, I use the quantitative analysis to look for variation in the rate of pre-attack warnings depending on the type of target (businesses, government officials, etc.)

In Chapter 6, I present the full version of my signaling model, which produces the following additional hypotheses:

H4: *In cases where the government cannot mobilize at all, militants who face any cost for harming civilians will warn the government.*

H5: *Governments are more likely to mobilize when the damage saved will be high.*

H6: *Governments are less likely to mobilize when doing so is costly.*

H7: *Governments are more likely to mobilize if key audiences will impose political costs on the government for ignoring truthful warnings.*

H8: *Militants are more likely to give false warnings if mobilizing is costly for the government.*

H9: *Militants are less likely to give false warnings if doing so carries a high political cost.*

H10: *Militants are less likely to give false warnings if there is already a high probability of prank warnings.*

My strategy for testing these is to ask direct questions of people who participated in the events. I interview members of the IRA and ETA, as well as police and other security personnel in Northern Ireland, Great Britain, and Spain. I use these structured interviews to determine which costs and benefits shaped the government decision to respond to warnings (or not to respond, in some cases). I also use the interviews to determine why each militant group gave false warnings or abstained from doing so. Additionally, I consult journalists and charity workers who received phone warnings from the IRA and ETA and passed these warnings on to police. These intermediaries played a crucial facilitating role in the phenomenon I study. They are also neutral parties (at least in affiliation) and excellent checks on conflict participants' recollections.

In Chapter 7, I apply my theory to historical cases of state behavior. This is not a full theory test, in the same way as the previous empirical chapters. It serves as an extension, an exploration of analogous conflict situations where my theory might generate insight about actors' behavior. The case selection is not rigorously controlled, as it was in my discussion of paired cases in Chapter 4. Instead, I select notable cases with a range of behavior on the dependent variable, warnings. My analysis of the cases – the US atomic bombings of Japan, China's 1958 shelling of Taiwanese Quemoy, and Israel's 2009 and 2014 bombing campaigns in Gaza – shows that my theory predicts state behavior well. It has the potential to explain an important aspect of interstate conflict, which has substantial consequences for civilians in war zones.

3 Pre-Attack Warnings by the Provisional IRA

We're not all mad bastards. We're just Irish. – Republican #1

In this chapter, I consider the pre-attack warning behavior of the Provisional Irish Republican Army (IRA). The IRA was the primary non-state belligerent in the Northern Ireland conflict, colloquially known as the Troubles, which lasted roughly from 1969 to 1998. The Troubles were a struggle for political control of Northern Ireland, the six northernmost counties of historic Ireland, which remained part of the United Kingdom following the 1918 Irish revolution and the creation of an independent state in the southernmost twenty-six counties. The partition of Ireland was a compromise solution to a simmering conflict between Catholics (a majority in the south) and Protestants (a majority in the north). Predominantly Catholic “nationalists” in the north were not satisfied with an agreement that left part of historic Ireland under British control. Catholics also suffered job and housing discrimination, and faced barriers to political participation in Protestant-dominated institutions. “Unionists” in the north defended Northern Ireland’s inclusion in the UK.

In the late 1960’s, Catholic civil rights demonstrations sparked violent police responses and a cycle of tit-for-tat sectarian attacks in cities such as Belfast and Londonderry (known by nationalists as Derry). Northern Ireland’s parliament requested British military intervention in 1969 to keep the rioting factions apart (English 2003). Remnants of the Irish Republican Army (IRA), the revolutionary force that successfully overthrew British rule in the south, initiated their own effort to secure northern nationalist communities against sectarian attacks. A more radical faction calling itself the Provisional IRA began an armed campaign against the government and security forces, with the intention of seceding from the UK and creating a single all-Ireland republic.⁴

There were three discernible phases in the violence.⁵ From 1969-1974, the Provisional IRA sought independence from British rule through direct, violent struggle. IRA forces carried out attacks on

⁴Although several republican groups carried out the “armed struggle,” the Provisional Irish Republican Army (hereafter, simply “the IRA”) carried out most of the violence on the republican side.

⁵I leave post-1998 violence by Irish Republican rejectionists for future studies.

British troops, local police and military reservists, pro-British “loyalist” paramilitary groups, and commercial and political targets in Northern Ireland and England. The IRA gained international notoriety for this last mode of violence, carrying out hundreds of bomb attacks (Harnden 1999: 64-65; Dillon 1994: 148-151).

From 1975-1993, the IRA pursued a “long war” of attrition. The IRA sought to impose costs on the British state, while insisting that the UK government negotiate a peace settlement with the IRA’s political wing, Sinn Féin. As part of this strategy, the IRA fought a public relations battle for legitimacy in the eyes of Irish, British, and international publics. IRA members in military prisons launched a series of protests and hunger strikes, demanding “political” rather than “criminal” status. Ten hunger strikers died. The first of these, Bobby Sands, stood for and won a Westminster parliament seat while on hunger strike. The spectacle of the strikes and Sands’ slow death by starvation brought international media attention to the IRA’s political demands. It pressured the UK government to grant the prisoners *de facto* political status and solidified the IRA’s new strategy to take power “with a ballot paper in this hand and an Armalite in this hand.”⁶

From 1994 to 1998, the IRA and Sinn Féin aggressively pursued a political settlement with the UK government, while strategically manipulating the level of violence in the armed campaign (Harnden 1999: 108). The Army Council, the IRA’s leadership body, declared a ceasefire in August 1994 to make way for Sinn Féin talks with the Conservative John Major government. When talks broke down in 1996, the IRA carried out spectacular truck bomb attacks in London and Manchester (including those referenced above) to bomb the British government back to the bargaining table. With the election of Tony Blair’s Labour government and a fresh start to negotiations, the IRA declared a new ceasefire in July 1997. With American diplomats acting as brokers, Blair, Sinn Féin negotiator Gerry Adams, and Army Council representative Martin McGuinness reached the so-called “Belfast” or “Good Friday” agreement in May 1998. The settlement left the territorial

⁶“Armalite” AR-15 and AR-180 assault rifles were favorite weapons of IRA gunmen. The “ballot paper” quote is generally attributed to Sinn Féin activist Danny Morrison, speaking at Sinn Féin’s 1981 Ard Fheis party conference.

status quo in place, established a power-sharing agreement between Sinn Féin and unionist parties, and laid out a process by which the IRA disarmed and abandoned hostilities.

Over the course of its nearly thirty year armed campaign, the Provisional IRA carried out at least 1,148 bombing attacks. One of the remarkable aspects of the IRA campaign is the relatively low casualty total – 737 people killed and 3,016 wounded – despite the large number of explosions.⁷ As the Manchester and Bishopsgate examples show, pre-attack warnings dramatically reduced the casualties in IRA attacks.⁸ To appreciate the life-sparing effect of these warnings, it is worth considering what a no-warning bombing by the IRA could look like. The IRA did carry out such attacks, sometimes intentionally and sometimes because of an operational failure to communicate a warning. On February 17, 1978, the IRA planted a time bomb at the La Mon Hotel outside of Belfast, while 450 hotel staff and patrons were inside. IRA bombers hung the device in the window of a crowded dining room, left the scene, and attempted to give a warning, but the pay telephone nearest to the hotel had been vandalized and the bombers could not immediately find another phone. Their eventual warning gave police nine minutes notice, too little time for an evacuation. Twelve people died and thirty were injured in one of the worst atrocities of the conflict. The casualty tolls from the IRA's massive truck bombs would have been far worse than those at La Mon, had the IRA not given warnings beforehand.

To explain the IRA's choice to give pre-attack warnings, I interviewed former IRA members, police, British army personnel, government officials, and a select group of journalists and charity workers who served as intermediary links between IRA warning callers and local police.⁹ Many

⁷Incident statistics taken from National Consortium for the Study of Terrorism and Responses to Terrorism (START). (2015). The actual number of bombings is certainly higher, because incidents that did not cause casualties tend to be under-reported in the journalistic sources consulted by GTD coders.

⁸Two of the IRA's other bombings (both with warnings) reinforce this point: the April 10, 1992 bomb at London's Baltic Exchange (2,000 lb bomb, £800 million in damage, 3 killed, 91 injured) and the February 9, 1996 bomb at London's Canary Wharf (1,100 lb bomb, £100 million in damage, 2 killed, 39 injured).

⁹The *Coiste na nIarichimí* Republican ex-prisoners support group made several former IRA prisoners available for interviews. Other IRA members were approached individually. Police, journalists, and government sources were also approached individually. The Northern Ireland Retired Police Officers Association (NIRPOA) provided background information on policing during the Troubles. The Samaritans organization provided background information on its role in communicating IRA warnings.

of those consulted preferred not to sit for formal interviews, and many interviewees preferred to be left “on background.” Of those who agreed to be interviewed and acknowledged, the breakdown of sources was:

- Eight former IRA members
- Six former police or army officers who held command positions during the Troubles
- Seven journalists
- One high level Northern Ireland justice official
- One high level British peace negotiator from the staff of Prime Minister Tony Blair

I use interviewees’ statements to discern the IRA’s reasons for giving pre-attack warnings. My analysis of police behavior and the process of communicating warnings is contained in Chapter 6. Where subjects requested anonymity, I refer to them using a general description (e.g. “former police officer”) or a generic identifier and number (e.g. “Republican #2”).

3.1 IRA Targeting: Attacking People vs. Attacking Property

The IRA didn’t always give warnings of bombs. They gave warnings of bombs when the intent was not to kill people. – Republican #1

The IRA’s pre-attack warnings transformed an essentially indiscriminate weapon, the bomb, into a sophisticated strategic instrument. Explosions have the same physical effect on buildings and other material targets regardless of whether the bomber gives a warning. But the same explosion has dramatically different effects on people if the perpetrator gives a warning. By engaging the state’s emergency response, warnings limit human casualties and confine a bomb’s damage primarily to physical targets.

In addition to reducing casualties, a logic related to the X parameter in my model, the IRA’s pre-attack warnings carried an operational cost ($D_1 - D_2$) because they reduced the chance of a

bomb attack succeeding. Upon receiving a warning, police rushed to the scene of the purported attack. An anonymous Royal Ulster Constabulary (RUC) “Special Branch” veteran described the police response as “a triage-type approach . . . to evacuate, to clear and cordon, and to make an assessment” of whether an actual threat existed at the scene. If a threat was deemed credible, police notified the British army’s 321st Explosives Ordnance Disposal (EOD) squadron, which evaluated suspected bombs and defused or destroyed devices that appeared to be real. From 1969 through 1998, the RUC reported 15,066 bombing incidents involving actual devices, roughly 6,300 of which were defused or detonated in a controlled fashion by ammunition technical officers (ATOs) from the 321st EOD. From the defused devices alone, ATOs recovered roughly fifty tons of explosives (RUC 1996, RUC 1998, Ryder 2005).

From the IRA’s perspective, these defusings were regrettable. After going to the trouble of training volunteers, building bombs, and sending teams out to place them, the organization was heavily invested in each bomb going off as planned. To deter army bomb disposal experts, or at least to slow them down, the IRA rigged many bombs with “anti-handling” devices that detonated when disturbed (Ryder 2005: 46). But whenever the IRA gave warnings, it assumed an increased risk of operational failure, with a corresponding reduction in the expected damage from the attack. This operational cost is anticipated in my model, where the reduction in expected damage is represented by the D_1 and D_2 parameters on the right side of the attacking *Militant’s* condition for warning: $X + G > D_1 - D_2$.

IRA members are quick to point out that for many attacks, the group gave no warning. This is important to note, because the theoretical model I have specified applies at the level of individual attacks. A group like the IRA can choose different warning strategies depending on the details of a given attack and whether a warning makes tactical and political sense in that situation. As IRA members stressed, it would be too simplistic to characterize the IRA as a warning group.

Throughout the conflict, the IRA carried out two very different types of operations: assassination-

type attacks directed at specific individuals, and so-called “commercial” attacks directed at the Northern Ireland and mainland British economies. In assassination attacks, the IRA fully intended to kill people – specifically the security forces defending the political status quo. Over the course of the Troubles, the IRA killed 286 people in 290 bomb attacks on military targets. The IRA also used bombs to assassinate police, killing 145 people in 235 bomb attacks (GTD 2015). The IRA attacked police outposts, planted “under car” devices on police vehicles, and placed booby trap bombs on the bodies of police, army, and paramilitary personnel already assassinated with guns. Whether bombs or guns were used, a warning about an assassination would have been self-defeating.

One may think of assassinations as cases where D_2 approaches zero. If warned of a ticking time bomb nearby, a person can simply leave the scene. $D_1 - D_2$ is relatively high, making it difficult to satisfy the militant’s condition for warning ($X + G > D_1 - D_2$). As one would expect, the IRA gave no warnings for assassination-type attacks. But when the primary target was something inanimate and immobile, such as a shop or a piece of commercial infrastructure, the expected damage was not reduced to such a low level, and the condition for warning was easier to satisfy. For those commercial attacks alone, the IRA would consider giving a warning. As Republican #1 remarked: “[T]he IRA didn’t always give warnings of bombs. They gave warnings of bombs when the intent was not to kill people.” This pattern of behavior is consistent with H3, that militants will give warnings when doing so does not greatly reduce the expected damage from an attack.

3.2 A Norm of Non-Combatant Immunity

[I]f you’re engaging in a war you have a responsibility that those who aren’t involved in the war don’t become the casualties of it. – Republican #3

In most commercial bombing attacks, the IRA did give warnings. To understand why, one has to consider the IRA’s strategic rationale for such attacks. Republican #2, an operative from one of Northern Ireland’s border counties explained:

[Commercial bombings] meant the retail centers of towns, or administrative centers in towns, government offices or offices of government departments, and public trans-

port infrastructure. ... Those targets were attacked for the purpose of disrupting the economic life in Northern Ireland under the rule of the British government ... to demonstrate to the British government that Northern Ireland wasn't a workable entity and that the IRA would prevent it from being a viable economic entity.

The IRA sought to turn Northern Ireland into an enormous money sink for the British government. However, its strategy of destroying commercial property and infrastructure did not necessarily require the killing of people at those locations. In fact, the IRA sought to keep the casualty toll among bystanders low. A former RUC Special Branch intelligence officer explained:

They didn't send volunteers out to kill and maim indiscriminately. ... [I]f you were told to do a thing called a "commercial bombing," which they did in the center of town, which was against commercial targets, you didn't want any collateral [damage]. Invariably somebody is going to get hurt somewhere along the line, but you try to minimize that by giving some sort of a warning.

Pre-attack warnings provided discrimination, allowing the IRA to damage property without harming as many people as they might otherwise. This is the logic of the signaling model's parameter, X , which represents the political cost for causing excessive casualties in an attack. For that logic to operate in reality, two basic conditions must obtain: First, the attack must pose a risk of harming people, as commercial bombings certainly did. Second, there must be some audience whose support or acquiescence the militant group requires, who will judge the casualties of a no-warning attack to be excessive and worthy of punishment. IRA members and police sources identified three casualty-averse audiences who provided indispensable support for the IRA: local communities who provided operational support to the group, Irish Americans who provided funds and weapons, and international political allies who provided leverage to influence the British government.

The notion of "excessive" casualties related to a norm of non-combatant immunity, which would be violated by no-warning commercial attacks. The norm of non-combatant immunity is well-established in international laws of war, including the Fourth Geneva Convention (1949), Relative to the Protection of Civilian Persons in Time of War. It is generally understood that members of the armed forces engaging in conflict on behalf of a state are legitimate targets for an opposing

state's military forces. Civilians, those who do not serve in the state's armed forces, are illegitimate targets. The IRA made similar distinctions.

In general, the IRA viewed itself as engaging in a military conflict with the UK government and the "British Crown Forces" who propped up Northern Ireland as a political entity. Anyone who was not part of the government, British Crown Forces, or loyalist paramilitary forces, and who did not support the activities of these groups, was a civilian and therefore not a legitimate target. In practice, British Crown Forces included army troops such as the Special Air Services (SAS) and Royal Irish Rangers (RIR), the military reservists of the Ulster Defence Regiment (UDR), and the police of the RUC, whether on or off-duty. Republican #3 explained the group's justification for this expansive definition of "military" targeting:

Any deployment by the British government in terms of propping up the state ... British army, RUC, locally recruited regiments the likes of the UDR, RIR, that sort of thing ... They're all armed. They're all put here for a specific reason. It was about defeating Republicanism. ... It was about upholding the state as it was. So they were the enemy and considered as such. ... They were considered military targets.

The IRA's definition of "military" also extended to people who delivered materials, cleaned floors, prepared food, and did other work at police or army facilities. The IRA did not give warnings before attacking these facilities, but the organization did make its targeting rules known in advance. Republican #2 explained:

[P]eople working in a civilian capacity in military bases, the IRA would issue a warning that anybody cooperating with British crown forces would be considered a target and that they should desist from carrying out any work ... And as the IRA would have termed it ... "anyone who's contributing to the British war machine" in such a fashion would be considered a target, and ... they wouldn't guarantee their safety.

Although the civilian category was circumscribed, the IRA considered these people to be immune from direct targeting and entitled to protection from accidental harm in commercial bombings. The IRA considered itself to be fighting on behalf of these civilians, in its capacity as "the legal and lawful government of the Irish Republic" (language taken from the IRA's Green Book training

manual).¹⁰ As Danny Morrison, a former Sinn Féin spokesman, remarked: “Why would the IRA kill civilians? Civilians weren’t the enemy.”¹¹ Republican #3 elaborated on the IRA’s moral logic:

You can’t on the one hand be saying you’ll be fighting on behalf of a people and about removing some sort of tyranny and then at the same time being so very blasé about human life. . . . [I]f you’re engaging in a war you have a responsibility that those who aren’t involved in the war don’t become the casualties of it.

Notably, the IRA’s understanding of non-combatant immunity applied to civilians on the other side of the conflict. Considering the Manchester and Bishopsgate bombings, for example, the IRA took steps to ensure that English civilians would not be caught up in the IRA’s bombings. Immunity for those civilians followed from a principle of proportionality in warfare. Danny Morrison explained: “Had the IRA wanted to, it could have destroyed the London Underground, but there would have been a high risk to civilians. . . . [Nationalists] weren’t that oppressed, to justify such indiscriminate actions.”¹² Accordingly, in its 1972 directive to commence bombing operations in England, the supreme Army Council of the IRA instructed the “Overseas Unit” to avoid civilian casualties, as the IRA did in Northern Ireland bombings (Anderson 2002: 267-268).

The imperative to protect civilians required the IRA to plan its operations carefully. The RUC Special Branch intelligence expert likened the IRA Army Council to “early risk management strategists.” There was an inherent tension between the goal of destroying civilian property and the imperative to safeguard civilians in and around that property. The IRA could sometimes resolve this tension by using different weapons: delayed-fuse incendiaries that could be hidden in shops at the close of business hours, setting fire to them when no one was inside.¹³ But in cases where the

¹⁰A reproduction of the Green Book may be found in Coogan (1993).

¹¹Although he previously served as a Sinn Féin spokesman and he admits being a member of the IRA at some unspecified point in the past, Morrison spoke as a long-time observer within Belfast’s republican communities, not as an observer of IRA activities.

¹²Morrison also stressed that, in his judgment and those of other nationalists, no level of oppression would justify truly indiscriminate actions or actions directly targeting civilians.

¹³These so-called “French Letters” consisted of an incendiary charge packed into the shell of a VHS cassette along with a sugar-coated, sulfuric acid-filled condom. Taking advantage of the fine manufacturing tolerances for condoms, IRA bomb makers determined the length of time it took for the acid to eat through the latex and react with the incendiary charge. French Letters could be hidden in shops immediately before the close of business, igniting hours later and setting fire to the store when the building was empty.

target could not be attacked with incendiaries or where the IRA's plan called for the destruction of buildings, protecting civilians meant ensuring their physical exit from the target area. Bomb warnings accomplished this task – if everything went as planned. They also disrupted business and traffic, tactical bonuses that advanced the IRA's strategy of commercial disruption.

3.3 Political Incentives for Warning: Maintaining Local Support

Our community were our sea, and we swam amongst them. – Séanna Walsh

The theory I have laid out predicts that militant groups like the IRA will give warnings when they expect to pay high political costs (X) for causing excessive casualties. Although the IRA's own stated aversion to civilian casualties goes some way toward explaining the group's warning behavior, the model's logic pertains specifically to political costs and benefits. IRA members' statements show that such costs were a major determinant of the group's behavior. The central issue was that key supporting audiences espoused the same norm of non-combatant immunity held by members of the group. IRA members might have found it unpalatable to attack civilian targets without warning, but such tactics were *politically harmful* because critical support bases would disapprove and withdraw their support from the IRA. The most critical audience, accounting for most of the IRA's political costs for harming civilians, was the IRA's support base among Northern Ireland's nationalist communities.

The IRA saw itself as the revolutionary vanguard of republicanism in Northern Ireland, but it could not have continued its campaign without substantial support from local nationalist communities. Nationalists provided material support to the IRA, including "call houses" where IRA members could meet to plan operations, store weapons, and sleep. Community members who did not offer up their homes as call houses would still allow IRA members to use their homes as get-away routes and hiding places. Brendan Hughes, Operations Chief for the IRA's Belfast Brigade later explained: "[M]ost people cooperated with the IRA; they left their back doors open, or if they saw you jumping over the yard wall, they'd open the back door if it was closed" (Moloney 2010: 66). For its very survival, the IRA needed local supporters to keep their doors open. National-

ists shared an ideology with the IRA, but their support depended on the group upholding certain standards of conduct, especially non-combatant immunity. Danny Morrison, himself a lifelong resident of Belfast's staunchly nationalist Andersonstown area, remarked: "Who's going to support an organization that is seen to be killing civilians, without thought, or without any ethics at all? ... Why, I know people who were thrown out of houses after certain attacks!"

Rank-and file IRA members developed a politically sophisticated understanding of their relationship with the local population. Of particular importance were the theories of Mao Zedong, as articulated in his 1937 text, *On Guerrilla Warfare*. Regarding the relationship between the local community and a guerrilla force, Mao writes:

The former may be likened to water and the latter to the fish who inhabit it. ... It is only undisciplined troops who make the people their enemies and who, like the fish out of its native element, cannot live (Mao 1989: 93).

Seven out of the eight on-the-record IRA interviewees made specific reference to the "fish and the sea" analogy. Séanna Walsh, the last public spokesman for the IRA, gave a typical account:

The IRA operated here in the north with the support of the community that they came from. It's like Mao Zedong talked about the fish in the sea. Our community were our sea, and we swam amongst them. Activities that killed civilians, or even hurt civilians, could have a detrimental effect on IRA operations. People would tell you, if you went to their house after something happened. They'd say "That's disgraceful. Why did you do that?" or "Why did they not get a warning?" And people would tell you "I don't want you coming back by the house," or "I'm not prepared to mind those weapons in my house if this is what you're involved in."¹⁴

Robert "Dinker" McClanahan, an IRA member who served 18 years in prison "for causing explosions in Belfast," offered a similar analysis:

You were the fish swimming in the sea. And you depended on the community to give you food, to give you shelter, to give you transport ... To give you help and assistance. To look after our guns. To look after our explosives. And they could have

¹⁴Walsh delivered the Provisional IRA's final public statement, distributed July 27, 2005, confirming the group's disarmament and the disbanding of its organizational structures for waging war. Walsh delivered the statement without a mask, the only time after 1972 that an IRA spokesman did so (Chrisafis 2005).

went to jail equally as ourselves. . . . If there was a really bad operation where civilians were severely injured or killed, that would be like a sickening factor for them and they would say, "No, I don't want to support you anymore."

In the vast majority of commercial bombings, the IRA adhered to the non-combatant immunity norm by giving advance warnings. The worst bomb-related atrocities of the IRA's campaign appear to have been mistakes – breakdowns in warning communication, failures to park a car bomb in the proper location, or bombs that detonated prematurely. According to the RUC Special Branch intelligence officer, the La Mon restaurant bombing and several other infamous attacks "looked very different in the planning stage" and were not "planned to be bloodbaths." But in the immediate aftermath of such incidents, it was not always clear that the IRA had given warnings, or that the warnings were given in good faith as genuine attempts to move people out of harm's way. The best the IRA could do in these cases was to claim that the warnings were ineffective, and the civilian casualties unintended. The community reaction to such atrocities could be harsh.

As a methodological aside, unintended bloodbaths like La Mon allow us to observe political costs that we would not be able to see or measure otherwise. When actors behave as formal models say they should, their behavior on the equilibrium path avoids such disasters. But reality produces informative tragedies. Technical failures and breakdowns of communication produce humanitarian and political consequences that conflict actors otherwise manage to avoid.

The "Bloody Friday" incident of July 21, 1972 was one such tragedy. In this attack, the IRA detonated nineteen bombs throughout Belfast in the space of eighty minutes. The IRA gave warnings for most of the bombs (reports differ as to how many) but the number of simultaneous attacks overwhelmed the ability of police to evacuate civilians. In practical terms, it was as if the IRA had given no warnings at all. The Bloody Friday attacks killed nine people, including seven civilians, and wounded 130.¹⁵ News stories and grisly television footage of the aftermath drove a permanent wedge between moderate and militant nationalists, in both Northern Ireland and the

¹⁵In at least one case, the explosion of one IRA bomb physically blocked the path of first responders racing to clear another area after receiving a bomb warning. Historical sources give the number of bombs with confirmed warnings at between fourteen and nineteen. See McKittrick *et al* (2001: 229) and BBC (2002).

Republic of Ireland. Those who favored constitutional solutions to Northern Ireland's problems would remain hostile to "armed force" republicanism for the duration of the Troubles (Moloney 2002: 117; Moloney 2010: 104). Even staunch republicans were disillusioned by the attacks. British authorities capitalized on the new political situation immediately, accelerating planning and execution of "Operation Motorman." This July 31, 1972 operation used thousands of soldiers, armored vehicles, royal marines, and a warship to break up IRA "no-go" zones in Derry and search houses there for IRA personnel and weapons. Sensing itself at a political nadir, the IRA leadership instructed cadres not to resist these incursions, but to abandon the safe houses and retreat. The group lacked the political standing even to protest what should have been a highly controversial action: a massive military operation by a Protestant-dominated government against mostly Catholic civilians in their own homes (Anderson 2002: 257-258; Moloney 2002: 117). This incident shows the magnitude of the political costs the IRA would have suffered if it engaged in no-warning bombings regularly. Based on the IRA's vulnerability in local communities alone, the political penalty for excessive killing (X) was very high.

3.4 Political Incentives for Warning: Securing American Guns and Money

[B]ad politics plays bad in the bars and in the clubs of New York and wherever, when you're asking for money. – Dinker McClanahan

Raising the political cost for excessive casualties further was the IRA's dependence on a casualty-averse Irish American diaspora, which provided much of the group's financial support and weaponry. When the Provisional IRA first formed in 1969, it possessed only a few outdated firearms to defend nationalist communities against mob violence. Commencing an armed campaign against British forces would have been impossible without substantial acquisitions of new weapons. During this phase and throughout the conflict, sympathetic Americans provided guns and funding to the Provisional IRA. Lax American gun laws allowed IRA sympathizers to purchase military-style firearms, such as the Armalite AR-15 and AR-180, which later came to symbolize the IRA's armed campaign. Americans sent disassembled guns by mail or inside the coffins of deceased relatives who wished to be buried in Ireland (Bell 1997: 438-439). Dedicated gun-running operations

brought more weapons, first in small shipments and later in large ones. Many of these weapons were acquired and shipped by Irish Northern Aid (Noraid), a self-described “humanitarian relief” organization established in coordination with IRA Belfast Brigade Commander Joe Cahill, who traveled to the US repeatedly to raise funds and procure arms (Anderson 2002; Moloney 2002, 2010; Wilson 1995). Noraid raised money from Irish Americans in pubs, churches, and social clubs, via direct mail, and through fundraising events featuring speeches by Cahill and other IRA members. Relatively radical Irish Americans were willing to support the IRA, but this support depended on the maintenance of a freedom fighter image. To that end, IRA speakers at Noraid events emphasized their links to the original Irish revolution and the progress of Irish self-determination. They eschewed direct references to bombs and the overtly socialist aspects of the Provisional IRA’s platform. In public appeals to moderate Irish Americans, Noraid claimed that the group’s “humanitarian relief” fund supported the families of imprisoned republicans – not the purchase of weapons. This distinction was important not only for legal reasons, but also to reassure moderate Americans who would not have donated money specifically to buy guns (Wilson 1995: 42-46). But Noraid’s implicit association with the IRA’s violent activity remained.

Throughout the Troubles, Noraid thrived when the IRA appeared to have the moral high ground. Fundraising increased after the government’s August 1971 introduction of indefinite internment for suspected IRA members, after revelations about abusive interrogation practices, and after the January 1972 “Bloody Sunday” incident, in which British troops shot and killed 13 unarmed Catholic civil rights protestors. After the July 1972 Bloody Friday bombings, fundraising declined to such an extent that Noraid leaders contacted high-level IRA members to complain about the bombing campaign and its effect on Noraid’s work (Wilson 1995).

Rank-and-file IRA members understood the importance of bomb warnings as international image management. Dinker McClanahan, a convicted bomber himself, described the “bad politics” of harming civilians:

[Y]ou had external audiences ... That could have been an audience in America, who

are supplying the funds, or supplying the weapons – In the early years, I’m talking say 1970 until probably ‘76, ‘77, your main source of weapons was coming from the US ... [W]hat I’m saying is bad politics plays bad in the bars and in the clubs of New York and wherever, when you’re asking for money to send back to the IRA.

The former high-level RUC Special Branch officer offered a similar analysis:

Could you continue to kill people in the numbers that you were and still maintain [support in] your American diaspora? Because you’re not a couple of freedom fighters coming down from the hill fighting an armored car. You’re actually blowing up innocent people shopping. ... You can’t do that.

3.5 Political Incentives for Warning: Cultivating International Legitimacy

And for people outside in other places looking in they could say, “Well yes, right, why is Britain in Ireland?” – Republican #2

Another factor raising the IRA’s political cost (X) for excessive killing was the group’s dependence on support from US politicians. Throughout the Northern Ireland conflict, the IRA sought to cultivate a positive image internationally, portraying itself as a self-determination movement throwing off a foreign occupation. The IRA faced a concerted effort by the British government to discredit this narrative. As part of that strategy, the British government sought to decrease its military presence in Northern Ireland, transferring anti-IRA duties from largely English troops to the Northern Ireland-born UDR and RUC. Republican #2 recalled:

[F]rom the middle-late 70’s it was a British army policy of normalization, because they wanted to put locally-recruited forces more to the front line against the IRA ... Because it was an easy argument for the IRA to say that British army forces shouldn’t be in Ireland. And for people outside in other places looking in they could say, “Well yes right, why is Britain in Ireland?”

As the British army sought to hand security duties over to local forces drawn disproportionately from unionist communities, the IRA became increasingly vulnerable to accusations of sectarianism. Attacks on the UDR and RUC were largely attacks by Catholics on local Protestants – not attacks on occupying English troops. The army troops who remained could be construed as peacekeepers helping to quell sectarian violence. Séanna Walsh recalled:

[T]he way the British portrayed what was happening here was, there were two warring communities, Catholics and Protestants, and [the British] were in the middle trying ... to keep these warring factions apart. Which is absolute bollocks as far as we're concerned.

The commercial bombing campaign also risked playing into the sectarianism narrative. The IRA tended not to bomb businesses in its own, largely Catholic, nationalist neighborhoods. Most commercial bombings would affect businesses in mixed or Protestant areas. No-warning attacks at these locations would disproportionately kill Protestant civilians. Bomb warnings reduced the incidence of such apparently sectarian atrocities. In doing so, they helped to ensure that when the IRA did kill people, the images fit the revolutionary narrative.

These perceptions were critical to winning diplomatic support from American politicians. Aside from the issues of fundraising and gun-running, the IRA saw the United States as a powerful source of political leverage to influence the British government. Post-Bloody Sunday outcry by Irish-American politicians, most notably Senator Ted Kennedy (D-MA), was instrumental in pressuring the British government to suspend Northern Ireland's parliament in 1972 (Wilson 1995: 77). The long-term effect of this change was to make Britain's involvement in Northern Ireland appear even more colonial and the IRA's violence more legitimate.

In another public relations victory for the IRA, US politicians, clergy and activists advocated in favor of IRA gunman Joe Doherty, to stop his extradition from a New York jail to the UK for killing a British Army captain. The pro-Doherty campaign rested on an assertion of "political prisoner" status – a proposition anathema to British policy but endorsed by 132 Congressional Representatives, Senator Orrin Hatch (R-UT), and the New York City Council, which named a street corner after Doherty. The Margaret Thatcher and Ronald Reagan governments' effort to extradite Doherty dragged on for eight embarrassing years (Wilson 1995: 261).

Most significant, however, was the role of US President Bill Clinton. Clinton's 1994 decision to grant a visa for Sinn Féin president Gerry Adams, against the wishes of the British government,

gave Adams an opportunity to address the American public through high-profile media appearances (Moloney 2002: 420). Clinton's endorsement helped to legitimize Sinn Féin's role in the peace process. His appointment of a special Northern Ireland negotiator, Senator George Mitchell (D-ME), helped to secure the IRA-UK peace settlement, which Clinton endorsed with a visit to Belfast and a high-profile handshake with Adams. Séanna Walsh expressed the IRA's understanding of Clinton's role:

One of the lessons that we had from the previous ceasefires of the mid-70's was that to get any movement from the British that we had to internationalize it. If it was internationalized, well then in that context, you could be a wee bit more relaxed. If the British said something and you had international guarantors to ensure that, "Actually this is what you said," once you do that, once you bring people like that into the equation, well then that changes the whole context. So it was crucial that people like Bill Clinton and the whole Irish American diaspora really bought into what was going on here.

The support of US politicians was critical, particularly during the 1990's, and Americans had already demonstrated an aversion to civilian atrocities like the Bloody Friday incident. Even in cases like the Manchester and Bishopsgate bombings, where the lives at stake were not Irish, the IRA found itself in an international spotlight, with substantial political liabilities (formally, a high value of X) if it failed to give warnings and its bombs killed civilians. Overall, this discussion of the IRA's support structure provides strong support for H1, that militants are more likely to give warnings when they pay a high cost for harming civilians.

3.6 Other Incentives to Warn: Multiplying Damage to "Legitimate" Targets

Police were open season if somebody could have a shot at them. – Republican #1

Beyond using warnings to avoid the negative political ramifications of harming civilians, the IRA used warnings to impose damage on British security forces and the Northern Ireland economy – both legitimate targets in the eyes of the IRA and its supporters. This aspect of warnings corresponds to my theoretical model's G parameter, representing the costs paid by the *Government* (and added to the *Militant's* end-state utility) when the *Government* mobilizes. Like the *Militant* in my model, the IRA gave warnings in part to impose costs on the state.

When planning a commercial attack, the IRA looked for ways to capitalize on the predictability of the government's response. Having planted a bomb and given a warning, the IRA could predict more or less how police would approach the scene and conduct their search and evacuation. According to John O'Hagan, an IRA member previously imprisoned for explosives-related offenses, it was a "very rare occasion that [the IRA] didn't look for the second opportunity" to attack police as they responded to the warning about a commercial bomb. The "second opportunity" might involve planting a sniper at the scene of the bombing. (In Republican #1's words, it was "open season" on police "if somebody could have a shot at them.") The second opportunity might also involve planting a second bomb at the scene of the commercial attack, timed to explode while security forces were there. Or the opportunity might involve booby trapping the commercial bomb itself. The British Army's 321st EOD squadron, tasked with responding to IRA bombs in Northern Ireland, lost twenty explosives experts during the conflict. Several were killed by booby trapped devices, otherwise standard-looking bombs with hidden components that detonated when an ammunition technical officer attempted to disable the device (Ryder 2005: 46).

The IRA could also use misleading warnings and dummy devices to induce unnecessary police responses and further disrupt the economy. The commercial bombing campaign was intended to cause disruption, via the bombs' physical effects first of all, and also by forcing evacuations and traffic diversions in the middle of the business day. The IRA realized that warnings could create the latter effect even if they didn't all correspond to real bombs. When mixed with a few true warnings, surplus warnings acted as economic damage multipliers. Republican #2 recalled:

If on the same day you planted one bomb but you give three other bomb warnings, you could cause major disruption: traffic disruption, business disruption, you would treble the effect of just planting one bomb.

These statements by IRA members show that the group's logic was the same as that of the *Militant* in my theoretical model, who uses warnings to impose added costs (G) on the state as it mobilizes to defend itself.

3.7 Evaluating the Theory

Recalling the summary of my theory in Chapter 2, the *Militant's* condition for giving pre-attack warnings, $X + G > D_1 - D_2$, yields three basic hypotheses:

H1: *Militants are more likely to give warnings when they pay a high political cost for causing excessive casualties.*

H2: *Militants are more likely to give warnings when responding to warnings carries a high cost for the government.*

H3: *Militants are more likely to give warnings when doing so does not greatly reduce the expected damage from an attack.*

My interviews of IRA members and Northern Ireland police lend clear support to H1, H2, and H3. By IRA members' own accounts, the group gave pre-attack warnings to avoid the political cost (X) it would suffer if its attacks caused excessive casualties. In the IRA case, "excessive" casualties meant harm to civilians who were not part of the "Crown Forces" maintaining British sovereignty over Northern Ireland. Important political constituencies – local nationalist communities, the Irish American diaspora, and US politicians with leverage to influence the British government – would withdraw their support if the IRA indiscriminately attacked civilians. To avoid such political costs, the IRA gave pre-attack warnings when bombing commercial targets. Notably, the IRA did not give warnings when attacking police and military targets. To the contrary, the group used warnings as a means of imposing additional damage on police and army targets, via ambushes. These ambushes, and the IRA's use of surplus warnings to "treble the effect" of real bombs, lend support to H2, which predicts warnings in cases where the militant group seeks to impose mobilization costs (G) on the government.

Looking at the other side of the *Militant's* condition for warning ($X + G > D_1 - D_2$), pre-attack warnings were enabled by a relatively low operational cost of giving warnings when attacking commercial targets. In commercial attacks, the target was physical in nature – a building or a piece of infrastructure. Those objects are immobile, so giving a warning makes comparatively

little difference in the expected damage to the target. Consistent with H3, the IRA gave warnings before commercial attacks, but not before attacks on people, in which the operational cost of giving warnings would have been much higher.

One potential critique of my hypothesis testing bears mentioning here. It is conceivable that a militant organization like the IRA would choose its targets based on the political costs of harming civilians. A group with a casualty-averse support base might refrain from attacking targets where the risks to civilians are very high, choosing instead to focus on different targets, such as police patrols or physical infrastructure in remote areas. In such cases, the operational cost of warning ($D_1 - D_2$) would not be independent of the underlying casualty aversion of the group and its supporters. This would make it difficult to test H1 (regarding the cost of excessive killing) independently of H3 (regarding the operational cost of giving warnings). However, there are IRA attacks where target choice and casualty aversion are clearly unrelated, and these cases give support to my theory's predictions.

The IRA's unsuccessful October 12, 1984 assassination attempt on British Prime Minister Margaret Thatcher is one example. In an attempt to kill Thatcher, an elite IRA member built a bomb into the wall of a hotel room directly beneath the room Thatcher would occupy during a planned stay at the hotel three weeks later. This tactic posed an obvious danger to hotel workers and other civilians who would be caught in the building collapse when the IRA bomb exploded. Nevertheless, Thatcher was a very important target, giving a high value of D_1 . A warning would have allowed Thatcher to escape, effectively reducing D_2 to zero and defeating the purpose of the attack. The IRA chose to carry out the attack, and as my theory would predict, the group did not give a warning. The explosion partially imploded the hotel, killing five people and wounding thirty two, most of them civilians. As this example shows, it is not necessarily the case that the cost of harming civilians determines a group's targeting (and therefore the operational cost of warning). It is possible to test H1 and H3 independently, and the IRA case provides support to both hypotheses.

4 Tests on Paired Case Studies

In this section, I present two pairs of contrasting case studies as additional tests of my theory. I have paired groups that engaged in different warning behavior. To enable tests of hypotheses involving my theory's subtle independent variables (the political cost for excessive casualties, the mobilization cost that can be imposed on the government, and the difference in expected damage from warning and non-warning attacks) I have selected cases to control for fundamental group characteristics such as their underlying grievances and ultimate political goals. The first case pair comprises ETA and the Tamil Tigers (LTTE). Both groups were motivated by ethnic grievances and sought secession as a political goal, but only ETA gave pre-attack warnings. The second case pair comprises the MRTA and *Sendero Luminoso* (the Shining Path). Both groups were motivated by revolutionary Marxism and both sought to overthrow the Peruvian government, but only the MRTA gave pre-attack warnings. If my theory is well specified, the differences in militant groups' warning behavior should be traceable to differences in the groups' political costs for causing excessive casualties (X), different response costs (G) that could be imposed on their target governments, differences in the operational cost of giving warnings ($D_1 - D_2$), or some combination of these.

In examining these cases, I use my previous IRA case study as a guide to sharpen my hypothesis testing. For instance, my theory predicts that groups will give warnings when they face high political costs (X) for causing excessive casualties. In the IRA case, these political costs were imposed by local, diaspora, and international supporters who would sanction the group if it harmed civilians. If the IRA case is typical of militant groups' political calculations generally, a comparative analysis of warning and non-warning groups should reveal differences in these groups' underlying support structures, with the warning groups having to place greater reliance on casualty-averse local, diaspora, or international diplomatic supporters. The non-warning groups should have more permissive political environments, with local, diaspora, and international supporters less willing or less able to sanction the group. The non-warning groups may also have other sources of support, which do not depend on the group avoiding excessive harm to civilians.

4.1 ETA and the “Revolutionary Ethics” of Warning

The Basque separatist group *Euskadi Ta Askatasuna* (ETA) is similar to the IRA in many respects. A nationalist movement, ETA seeks to establish a homeland, *Euskal Herria*, for Basque people, who despite their distinct language and cultural identity, have lived under the political rule of Spanish and French governments for hundreds of years. Like the IRA, ETA has decades of history as a resistance movement, dating to the 1930's, when Basque elements fought against Francisco Franco's fascists in the Spanish Civil War. For decades after the fascist victory, Franco's government suppressed most expressions of Basque language and culture in Spain. In the late 1950's, Basque nationalists began a new guerrilla campaign against Franco's government. ETA was the longest-lived of these guerrilla elements, continuing its armed campaign until 2011, when it declared an indefinite cessation of its hostilities. Unlike the, IRA, ETA failed to achieve any of its political goals, and remains a marginal force in Spanish and Basque nationalist politics.

ETA employed a variety of tactics during its violent campaign. These included assassinations of police and army personnel, including Admiral Luis Carrero Blanco, Franco's would- be successor. ETA's December 20, 1973 road mine attack on Carrero Blanco's motorcade was arguably ETA's most historically significant action because it helped to ensure Spain's transition away from fascist government (Bew and Gurruchaga 2009: 178-80). ETA also employed IRA-like bombing tactics against economically significant public places, businesses, and infrastructure. In these commercial attacks, ETA sometimes gave warnings like those of the IRA.

For instance, in its “summer campaigns” against Spain's tourist economy, ETA attacked beaches and vacation resorts. ETA commandos buried bombs in beaches, with long fuses set to detonate weeks later. Shortly before the bombs were to explode, ETA would call Spanish emergency services to inform them of the impending explosions. A July 20, 2008 ETA operation was typical of summer campaigns that went as planned: “Four low-power devices” exploded “in Laredo and Noja after a telephone call on behalf of the terrorist group warned of their placement in the sands ... The announcement took place at half past ten, through a recording in which a distorted female

voice was heard saying that the bombs would explode between noon and three p.m.” The Spanish *Guardia Civil*, a paramilitary police force concerned mostly with suppressing ETA, evacuated the beaches, warning residents of nearby homes to stay inside and sealing off roads and waterways until the bombs exploded. These emergency interventions prevented all but one minor injury (*El Correo* 2008). ETA also gave warnings before larger bombings. The group’s December 30, 2006 van bombing of a parking garage at Madrid’s Barajas airport used more than a thousand pounds of explosives, destroying the five story parking garage and damaging 1,300 parked cars. The ETA commando unit made warning calls to four different media organizations and emergency hot-lines, giving more than an hour’s notice of the attack. Despite the warnings and authorities’ effort to evacuate the garage, two Ecuadoran citizens sleeping in their car were killed (*La Vanguardia* 2010).

This was a pattern throughout ETA’s campaign: Warnings spared many lives, but not all of them. However, the results of one particular attack show how much worse things could have been, had ETA not given warnings at all. The June 19, 1987 bombing of a Hipercor supermarket in Barcelona killed twenty-one people and wounded forty-five. An ETA telephone warning gave roughly forty-five minutes notice of the attack, but police failed to arrive promptly at the scene and failed to conduct a thorough search before deeming the warning a hoax and leaving. As a result, people were still shopping when the bomb went off (Argemi 1994). The Hipercor atrocities accounted for nearly a quarter of all deaths caused by ETA’s economic bombings during the conflict. Substantial though it was, the civilian toll of ETA’s campaign, 104 fatalities and 800 injuries in 711 bombings, is strikingly low given how many Hipercor-like atrocities ETA could have inflicted had it chosen never to give warnings.¹⁶

Antton Etxebeste, a former second-in-command of ETA, agreed to be interviewed for this project to explain ETA’s rationale for giving pre-attack warnings. Although no longer an ETA member, Etxebeste has a long history within the group. Most notably, he served as ETA’s representative

¹⁶Statistics compiled from the Global Terrorism Database.

in secret diplomatic talks with the Spanish government, held in Algiers under French auspices during the 1980's. When the so-called *mesa argel* talks broke down, the Spanish government had Etxebeste exiled to Latin America and imprisoned. He lost his leadership role sometime in the 1990's, when it became clear that the Spanish government would not allow his release and would no longer use him as an intermediary to convey messages to the rest of ETA. Etxebeste's statements show that, in general, ETA's motivations for giving warnings are consistent with the logic of my theory and formal model.

Like the IRA, ETA pursued a two-track strategy, targeting Spanish security forces and the Spanish economy. As Etxebeste described it, "[t]he two pillars ... of the armed actions to destabilize the state are the ... occupying forces, then infrastructure." Spanish police and military personnel might be attacked with car bombs and roadside mines. In such attacks, ETA gave no warning. In other types of attacks, however, ETA used warnings to impose additional damage on security forces. ETA ambushed police as they approached the scenes of bomb threats against infrastructure. ETA planted extra bombs to kill security forces as they evacuated civilians from commercial targets, and ETA booby trapped its bombs to kill bomb disposal technicians. Although it may seem cynical to target security forces as they respond to bomb warnings, Etxebeste disagrees: "The distinction is clear ... We never considered the occupying forces victims," only as "targets." ETA's tactics represent a use of warnings to impose added costs (G) on the government as it mobilizes to reduce damage. This behavior is consistent with the logic of H2, which states that militants will give warnings when mobilization carries high costs for the government. The results of ETA's attacks on security forces were quite grim. The group's 298 bombings of police and military targets, counting both no-warning attacks and ambushes piggybacked onto civilian attacks, killed 159 and wounded 1,044.¹⁷

ETA generally gave warnings when attacking economic targets and infrastructure. Economic and infrastructure targets are typically physical in nature, and ETA made a distinction between

¹⁷Statistics generated from the Global Terrorism Database.

attacking property and attacking civilians in the vicinity. The group's strategy did not require the targeting of shoppers and passers by. Civilian targeting also violated what Antton Etxebeste termed, "revolutionary ethics." ETA understood itself as being "in an armed clash between military forces," which nonetheless transpired "in places where ... there would be possible risks to civilians." "The aim was to meet the military objective, economic destabilization of the state, and always avoid any possible side effect of civilian casualties." Giving warnings was a way of avoiding this "side effect" while continuing to attack the Spanish economy. Etxebeste explained the process of warning in detail:

In cases in which you needed to give an alert for having placed an explosive, it was the *kommando* [ETA's basic military unit] itself which advised various organizations, not so much the police, but various agencies of a public, institutional character – it could be the Red Cross, radio stations themselves, or other organizations of an institutional character. [The phone call] was normally made with a sufficient time interval – if the explosive was to explode at midnight, then three quarters of an hour or half an hour in advance, precisely to give a chance to evacuate so that there was no liability to civilians in the action itself.

ETA also made efforts to avoid civilian casualties while carrying out attacks on security forces. If ETA laid a remote controlled bomb alongside a road to attack a passing police vehicle or placed a bomb near a security forces facility, civilians might enter the area, unaware of the impending attack. The leader of the *kommando* had the option, in Etxebeste's words, "to squeeze or not to squeeze" the button, and the choice was "always not to do so" if civilians were at risk. If ETA chose not to detonate the bomb, it would make a warning call after the fact, informing the government about the unexploded device so that it could be found and defused safely.

ETA's reasons for avoiding civilian casualties were in keeping with my theory, and with the pattern shown in the IRA case. Critical bases of support would impose a high political penalty (*X*) by withdrawing their support if ETA killed civilians. As in the IRA case, the political cost for causing excessive casualties is best seen in cases where the group committed operational or political errors, encountering costs it avoided at most other times. For instance, in certain controversial cases, ETA would launch attacks on security force installations, which might have civilian staff

or work crews performing various tasks. ETA gave general warnings to all civilians not to enter security forces facilities, or even to pass by them, because the facilities were considered legitimate military targets for attack. In practice, however, civilians did enter those areas. The tension between sparing civilians and attacking security forces was most acute in the case of *casa cuarteles* – barracks housing Spain’s special *Guardia Civil* police and their families. These living arrangements predate the conflict with ETA, but Etxebeste and other ETA members alleged that the *Guardia Civil* were using their families as “human shields.” ETA gave a public warning to the *Guardia Civil* in advance: “First,” Etxebeste said, “remove the *casa cuarteles*” from Basque territories, “and if the *cuarteles* are not removed, at least civilians should leave the barracks.”

When ETA carried out its threats, the results were horrific. A December 11, 1987 car bomb attack on a *casa cuartel* in Zaragoza killed eleven people, including five children. A May 29, 1991 attack in the city of Vic killed nine people, also including five children (*El País* 2009, *El Economista* 2009). The Basque public’s reaction to these attacks was to denounce ETA for killing civilians, even though the target itself was “military” and ETA had given a general warning in advance. In the case of the Zaragoza attack, mainstream Basque nationalist parties responded by signing a pact with major Spanish parties, denying ETA any future role in negotiations on the status of Basque regions of Spain (Bew and Gurruchaga 2009: 211). These setbacks show that the group’s political cost for harming civilians (X) was high.

My analysis of ETA supports Hypotheses 1-3, derived from my theory. ETA gave pre-attack warnings to avoid the political cost for causing civilian casualties (X) and to impose mobilization costs (G) on state forces who responded to warnings. The group’s warnings were enabled by a low operational cost of giving warnings ($D_1 - D_2$) in commercial attacks, compared to attacks on human targets, for which ETA gave no warnings.

4.2 The Liberation Tigers of Tamil Eelam

ETA's warning behavior followed a political situation similar to that of the IRA: supporters ready to impose a high political penalty for civilian casualties, an opportunity to impose high mobilization costs on the government, and a relatively low amount of damage sacrificed by giving warnings for attacks on commercial targets. The Liberation Tigers of Tamil Eelam (LTTE) engaged in the opposite behavior: no-warning attacks that caused tremendous harm to civilians. The difference cannot be explained by fundamental group-level traits like underlying grievances and political goals, since ETA and the LTTE shared these. Instead, the difference is traceable to a very different political situation in the LTTE case, yielding a dramatically lower cost (X) for harming civilians.

The Sri Lankan civil conflict in which the LTTE participated was actually a series of four wars stretching from 1983-2009. The underlying dispute concerned the treatment of Sri Lanka's Tamil minority and the potential creation of an independent *Eelam* state in majority Tamil areas. Since gaining independence from British rule in 1948, Sri Lanka's largest ethnic groups, the Tamils and Sinhalese, have struggled to stake out their respective roles in Sri Lankan politics. With 75 percent of the country's population, the Sinhalese have used the nation's democratic institutions to enact their policy preferences over those of the 11 percent Tamil minority. The Tamils' grievances include the designation of Sinhalese as the country's official language, the designation of Buddhism as the country's national religion (most Tamils are Hindu), and discriminatory university admissions policies that make it difficult for Tamils to hold administrative positions in Sri Lanka's government (Weiss 2012: 41-43). Sri Lankan Tamils have also faced outbreaks of ethnically motivated violence, including riots in 1956, 1958, 1977, 1981, and 1983 (BBC 2013a; Chattopadhyahya 1994: 51-66). The "Black July" riots in 1983 killed as many as 3,000 Tamils, spurred half a million to flee to other countries, and set off the civil wars that killed up to 100,000 people over the next 26 years (Chattopadhyahya 1994; Weiss 2012; Australian Broadcasting Corporation 2009; US State Department 2009: 6).

The LTTE was both an instigator of the Sri Lankan conflict and the primary belligerent on the Tamil side. Active on a small scale since the 1970's, the Tigers vaulted to prominence on July 23, 1983, ambushing a Sri Lankan Army patrol in Jaffna province and killing thirteen army soldiers. This event helped to provoke the Black July pogroms. The subsequent flood of refugees streaming into the southern Indian state of Tamil Nadu prompted the Indian government to train Tamil guerrilla groups, including the LTTE, to push Sri Lankan government forces out of Tamil areas. The LTTE exceeded India's intended mandate, however. The Tigers attacked the Sri Lankan Army, massacred Sinhalese and Muslim civilians in Tamil areas, and turned its guns on India, ousting an Indian Peacekeeping Force (IPKF) that landed in Sri Lanka to disarm its former proxies. The LTTE "liberated" substantial portions of Sri Lankan territory before enacting a ceasefire with the government in 2002-2006. The LTTE administered a *de facto* state in these areas, with banking, postal, educational, and immigration systems. But after peace talks broke down, the government swept all of this away. In 2008 and 2009, the Sri Lankan Army corralled the LTTE into a small area of the northern coast, shelling the Tigers (and up to 40,000 civilians) out of existence (Weiss 2012: 46-51, 72-84).

Throughout its history, the LTTE was notable for its extreme violence. On the battlefield, the group was ferocious, outfighting professionally trained Sri Lankan military forces and massacring enemy captives *en masse*. Off the battlefield, the Tigers were notorious for their attacks on civilians. These include the May 14, 1985 massacre of 146 civilians at a bus station and Buddhist shrine in the city of Anhuradhapura; the August 3, 1990 massacre of 110 civilians at two mosques in the Batticaloa district; the October 15, 1991 massacre of 109 Muslims in Palliyagodella, Polonnaruwa district; and the September 18, 1999 massacre of more than 50 Sinhalese villagers in Gonagala, Ampara (Routray and Singh 2006; Kamalendra 1999; Swamy 2003: 123, AP 1990).

The LTTE also carried out bombings of civilian targets without warning. Examples include the April 21, 1987 car bombing of the Central Bus Station in Colombo, killing 113 people; the January 31, 1996 suicide truck bombing of the Central Bank of Sri Lanka in Colombo, killing 91; the

July 24, 1996 bombing of a commuter train in a Colombo suburb, killing 64 people; and the January 25, 1998 suicide truck bombing of the Sri Dalada Maligawa (the “Temple of the Tooth,” the holiest Buddhist shrine in Sri Lanka), killing 17 people (BBC 1987, BBC 1996, *New York Times* 1996).

These attacks on public places served a communicative function, demonstrating the LTTE’s strength and the Sri Lankan government’s inability to defeat the Tigers militarily. Although the physical locations themselves could have been attacked with warning, the LTTE chose to give no warnings, maximizing the civilian casualty toll. As early as 1987 (the year of the Colombo bus station bombing) an Indian intelligence agency supporting the LTTE’s fight against the Sri Lankan government reportedly encouraged the Tigers to attack civilians, arguing: “As long as the south remains quiet, no pressure can be brought” on the government to settle the conflict (Swamy 1994). Velupillai Prabhakaran, founder and leader of the LTTE, expressed similar ideas in a 1991 BBC interview, remarking that, given the escalating civilian death toll, “The Sri Lankan government now knows it can’t impose a military solution on the ethnic problem” (Morris 1991).

The Tamil Tigers pioneered the use of suicide bombing tactics, often using them to attack civilians with maximum surprise. High casualty bombings served as responses to operational setbacks on the battlefield, communicating the Tigers’ resilience despite the Sri Lankan army’s apparent gains. The Central Bank and Dehiwala train bombings followed shortly after the Sri Lankan Army reconquered the Jaffna Peninsula, previously the Tigers’ stronghold, in December 1995. (Stung by the loss of their *de facto* capitol, the Tigers responded by causing carnage in Sri Lanka’s capitol.) In February 2009, as the Sri Lankan army approached the point of final victory over the LTTE, the Tigers again used suicide bombings to communicate their resilience. The LTTE’s “Air Tigers” packed two small aircraft with an enormous quantity of explosives and attempted to crash them into buildings in Colombo, only to be shot down by the Sri Lankan Air Force (Wax 2009). Even if the LTTE’s intention had not been to target civilians, if the purpose of an attack was to communicate the resilience of the group, it made little sense to accept the added risk of operational failure. In formal terms, the operational cost of giving a warning in such cases ($D_1 - D_2$) was prohibitively

high. The LTTE's choice not to warn in these cases is consistent with Hypothesis 3, derived from my theory.

Despite the operational drawbacks of giving warnings, the LTTE still had to consider the political ramifications of engaging in deliberate atrocities against civilians. In my theory's terms, a very high value of X could have outweighed the high operational cost of giving warnings. It does appear that the LTTE faced some political costs for excessive killing, because the Tigers did not claim (and often explicitly denied) responsibility for their bloodiest no-warning bombings, even in cases where the use of suicide tactics made it absolutely clear that the Tigers had carried out the attacks. The question is, which audiences were the Tigers worried about offending, and were these political concerns as severe as those faced by the IRA and ETA?

Recalling from the IRA and ETA cases the different sources of political costs for harming civilians – alienating local supporters, alienating diaspora supporters, and alienating the international community – it appears that the Tigers did not have to worry about the first two. Particularly during periods when the Tigers controlled swathes of majority Tamil territory, the organization owned its own radio stations, ran its own schools, and could generate a propaganda narrative that portrayed its actions as necessary, given the situation. Interviewed for this project, M.A. Sumanthiran, a Sri Lankan Member of Parliament and human rights lawyer of the Tamil National Alliance (TNA), denied that “either side approved of attacks on civilians.” But at the time, the Tamil Tigers convinced many people that atrocities were “a necessary evil to put up with ... for the moment until we attain our objective and once we have obtained it, then things will be different. ... Nobody will say that was right, but even today there are people who say ‘But at that time, it was necessary to have done that.’” For many Tamils, the Tigers' bold actions proved the effectiveness of the group. According to Sumanthiran, Tamils “found the LTTE to have been the only force that was able to stand up to the government in an effective way. Political parties couldn't. We talk, we shout, we scream, but we couldn't deliver anything. It was only the LTTE that could actually physically hold the government forces at bay.”

With regard to diaspora fundraising, the Tigers' no-warning bombings did not pose much of a political problem either. During the Sri Lankan Civil War, the Tamil Tigers drew funds and weapons from large Tamil communities in the United Kingdom, Canada, the United States, and elsewhere. Many Tamils in the diaspora communities were refugees, having fled Sri Lanka following the 1983 "Black July" pogroms. In that instance, Sinhalese Sri Lankans had massacred thousands of Tamil civilians, with the apparent complicity of the Sri Lankan police and military. Many members of the Tamil diaspora bore an understandable grudge against the Sri Lankan government and Sinhalese people generally. Those who did not bear a grudge might still be willing to overlook LTTE atrocities because the Tigers were the only rebel group capable of wresting an independent *Eelam* out of the Sri Lankan state. At any rate, diaspora Tamils learned much of what they knew about the Sri Lankan war through nationalist news outlets such as Tamilnet, which maintained a close relationship with LTTE spokespeople. As the only viable militant group, with the ability to craft a propaganda narrative and shape the flow of information to an emotionally engaged base, the Tigers were able to commit atrocities and still raise millions of dollars abroad.

However, in terms of international legitimacy, the Tigers did suffer costs for inhumane behavior. Velupillai Prabhakaran bristled at the charge by media and governments that the Tamil Tigers engaged in "terrorism." In his 2001 annual public address, Prabhakaran summed up the Tigers' view of their struggle: "It is neither separatism nor terrorism. We are fighting for the emancipation of our people against racist tyranny, against military occupation, against state terror" (Ubayasiri 2013). Prabhakaran was not merely quibbling over a word. In the UK, US, and Canada, the designation of the LTTE as a terrorist organization meant that the LTTE would be banned from raising funds. Diaspora Tamils might be willing to contribute to the LTTE's cause, but if governments intercepted the money, the Tigers would still be denied critical support. This is exactly what transpired. Having already designated the Tigers as a Foreign Terrorist Organization in 1997, the United States reclassified the group as a Specially Designated Global Terrorist group in November 2001, bringing post-September 11th investigative resources to bear on the group. The UK and

Canada proscribed the Tigers in 2000 and 2006. Together, the three countries targeted the Tamil Rehabilitation Organization (TRO), arresting its leaders on charges of funneling millions of dollars to the Tamil Tigers under the guise of medical aid and 2004 tsunami relief. The FBI complaint against the TRO leaders is particularly telling: In addition to raising funds for the Tigers, members of the TRO allegedly offered a million dollar bribe to an official at the US State Department in exchange for removing the Tamil Tigers from the Foreign Terrorist Organization list.

Given the importance of the “terrorist” label internationally, it is not surprising that the LTTE left its bloody no-warning bombings unclaimed. However, without strong local opposition to atrocities, the LTTE’s overall cost for harming civilians (X) was low compared to that of the IRA and ETA. The international political cost of no-warning attacks was not high enough to outweigh the communicative value of attacking civilians and the strong operational incentive ($D_1 - D_2$) to ensure the success of each attack.

Discussion

The comparison of ETA and the Tamil Tigers upholds the basic hypotheses derived from my theory. Compared with the LTTE, ETA had a substantially higher political cost for causing excessive casualties (X), due to local Basques’ aversion to civilian casualties and their willingness to sanction the group. Tamils in Sri Lanka were unwilling to sanction the LTTE because abuses by the Sri Lankan government had convinced them that safety should be their primary concern, and the LTTE was the only group capable of ensuring their safety. At any rate, once the LTTE secured control of territory, it gained the ability to tax Tamils and recruit coercively, making the group less vulnerable to popular sanction. The group also had the support of an international diaspora and a state patron (India) for part of the conflict, rendering the group less dependent on local populations for financial support and weapons. Of the two groups, ETA was far more accountable, with a higher X as a result.

Setting aside its attacks on security forces, ETA had a generally low operational cost for giving

warnings (formally, a low value of $D_1 - D_2$), when it attacked immobile targets such as businesses, infrastructure, and tourist beaches. Sri Lanka's tourist economy also offered the LTTE beaches (and Buddhist shrines) to attack, but even in those cases, it chose to attack without warning. Taken together, this evidence supports H1, that militant groups with high political costs for targeting civilians are more likely to give warnings. The fact that ETA did so only in commercial and infrastructure attacks supports H3, that militant groups are more likely to give warnings when the operational costs of doing so are low.

It is difficult to test H2 through a cross-case comparison of ETA and the LTTE. Without observable LTTE warnings and government responses, it is difficult to know the government's full cost of mobilizing if warned. What can be said is that, by Antton Etxebeste's own account, G played a role in incentivizing ETA's behavior. In ambush and *cazabobo* attacks, the role of the warning was to draw government forces into harm's way and impose costs on the state. This evidence supports H2.

With regard to guiding further research, the comparison of ETA and the LTTE raises an intriguing question: Is there is a hierarchy of audiences, in terms of their ability to impose political costs for no-warning bombings? ETA and the IRA, for instance, faced a loss of local support if they carried out no-warning attacks. This was sufficient to induce warning behavior by these groups. The Tamil Tigers faced international problems when they targeted civilians (specifically, the designation as a "special" terrorist group and the subsequent crackdown by the US, UK, and Canada). The concern over international consequences was not in itself sufficient to induce warning behavior by the LTTE. It appears that the loss of local support is far more problematic for a militant group, particularly if the group relies on local populations for vital resources such as shelter. Sanction by international audiences appears to be a lesser concern, assuming the group does not also experience sanction by its local base.

4.3 The MRTA

In this section and the following, I present case studies of the MRTA (Túpac Amaru Revolutionary Movement) and *Sendero Luminoso* (Shining Path). These Marxist groups fought simultaneous revolutionary wars against the government of Peru, but only the MRTA gave pre-attack warnings. This is a very well controlled pair of cases, and my goal is to identify, in as much detail as possible, the political factors that encouraged one group to give warnings and the other group to attack without warning. If my theory is well-specified, the critical factors should correspond to one or more of the independent variables I have identified: the political cost of harming civilians (X), the value of response costs that can be imposed on the government (G), and the amount of damage sacrificed by giving warnings ($D_1 - D_2$). Those variables should also explain any within-case variation, where a group gives warnings for some attacks but not for others. I begin with a summary of the Peruvian civil war in which these two groups participated.

The political conflict in Peru began in 1980, lasting roughly 20 years and claiming the lives of at least 69,000 Peruvians. *Sendero Luminoso* and the MRTA were the two main rebel actors. Although they shared a Marxist ideological framework, their origins were different. The MRTA's roots lay in mainstream, urban Peruvian socialism, including labor movements and the "legal left" electoral politics of *Alianza Popular Revolucionaria Americana* (APRA). The MRTA espoused a Leninist ideology and a concept of guerrilla warfare borrowed from Cuba's Fidel Castro and Che Guevara (Willakuy 2004: 183-5). At the same time, the MRTA was open to working with APRA, other left parties, and even reformist elements of the Catholic Church to achieve its goals of "a socialist economy," "land reform," "popular democracy," and "a new Peruvian identity" (McCormick 1993: 7). In contrast, *Sendero Luminoso* originated in the interior region of Ayacucho, espousing a radical interpretation of Maoism developed by Abimael Guzmán Reynoso, a philosophy professor at the National University of San Cristobal in Huamanga. Guzmán advocated the destruction of existing economic and social institutions and their replacement with *Sendero's* own organizations – neighborhood committees, labor committees, peasant committees, and others. *Sendero* cadres would "militarize" Peruvian society, destroying state forces and bringing "the

masses” in line with *Sendero’s* program, using extreme force against anyone who did not submit to the party’s “democratic centralism” (Palmer 1992; Marks 1992). Not surprisingly, *Sendero Luminoso* perpetrated most of the violence during the conflict: 31,331 deaths or 54 percent of the total people killed, compared to 37 percent caused by state agents and 1.8 percent caused by the MRTA (Willakuy 2004: 18, 183).

The *Comisión de la Verdad y Reconciliación* (Truth and Reconciliation Commission) convened by the Peruvian government to investigate the former political conflict divides the war into five periods. The first, from May 1980 through December 1982, began when *Sendero Luminoso* burned ballot boxes in Cangallo province to protest Peru’s transition from a center-left military dictatorship to democracy. The period ended when Peru’s new democratic government placed Ayacucho under military control, effectively acknowledging that police could not contain the growing *Sendero* insurgency. The second period, from January 1983 through June 1986, began with the militarization of Ayacucho and ended with simultaneous riots in three prison facilities in the Lima region. *Sendero Luminoso* and the government escalated their violence during this period (the government killed 238 people in the prison riots alone) and the MRTA began its own armed campaign in 1984. 1984 was the bloodiest year of the conflict, with more than 4,000 deaths and disappearances. During the third period, from June 1986 through March 1989, violence spread to all parts of Peru. This period ended with the attack by *Sendero Luminoso* and drug traffickers on a police station in the department of San Martín. This attack convinced the government to adopt a new strategy of aligning itself with local *campesino* (peasant) militias, allowing them to take the lead in dislodging unwelcome *Sendero* cadres. The fourth period lasted from March 1989 through September 1992. During this time, the MRTA tried and failed to take control of the city of Tarma, losing many of its best officers and entering a state of irreversible decline. As the government’s new anti-subversive strategy loosened *Sendero Luminoso’s* hold on the countryside, *Sendero* expanded its operations in Lima to include “armed strikes” and car bombings. 1989 was the second deadliest year of the conflict, precipitating a political crisis and a self-coup (*autogolpe*) by President Alberto Fujimori, who assumed quasi-dictatorial powers in April 1992. Despite the chaos, police in Lima apprehended

Abimael Guzmán and MRTA leader Victor Polay Campos. The fifth period lasted from Guzmán's September 1992 capture through November 2000. Reeling from Guzmán's loss, *Sendero Luminoso* slowly succumbed to the government-backed *campesino* militias. Government forces decisively defeated the MRTA in an April 22, 1997 gunfight at a Japanese ambassador's residence, which the group had occupied in a futile attempt to exchange hostages for imprisoned MRTA officers. Although he had defeated both *Sendero Luminoso* and the MRTA, President Fujimori fled the country in November 2000, attempting (unsuccessfully) to avoid prosecution for corruption offenses committed during his autocratic rule. Fujimori's flight effectively ended the conflict, although some *Sendero Luminoso* elements have remained at large in remote regions, skimming money from the Peruvian cocaine trade and occasionally carrying out acts of political violence (Willakuy 2004; Tobar 2002; US State Department 2014).

Although the MRTA styled itself as a guerrilla army, many of its actions followed an armed propaganda model. According to MRTA second-in-command Miguel Rincón Rincón, the MRTA's "conception ... of revolution" was "as the work of the masses themselves." The MRTA's role was to act as instigator of an "organic" process, to carry out exemplary acts that would awaken "the enormous brain of a people, the imagination of millions" of Peruvians, who would take up the struggle as their own. Rincón explained: "All of our guerrilla actions sought to convey a message of justice and revolution to our people" (Rincón 2002). MRTA violence was political theater, with an underlying moral that the group sought to communicate to the masses. The MRTA selected its targets and tactics accordingly.

Notably, the MRTA did not give warnings when attacking government targets or companies providing security for government facilities. For instance, on January 14, 1991, the MRTA detonated a car bomb at a fueling station adjacent to the Interior Ministry building in Lima. The 150 kg bomb killed two security guards and injured between fifty and one hundred people in the surrounding area. On February 5, 1991, the MRTA attacked a facility belonging to the Pesevisa Company, a subsidiary of the US-based Wackenhut company, which at the time was tasked with protecting the

US embassy in Lima. The early afternoon attack took place while the Pesevisa building was fully occupied. MRTA commandos approached the parking area in front of the building, spraying automatic weapons fire at the building and planting a bomb that killed two Peruvian security guards outside the building and wounded as many as one hundred people (US State Department 1991: 9).

However, at other times the MRTA attacked business targets with no relation to the Peruvian government or US security apparatus. Frequently, the group attacked businesses representing *yanqui* capitalism in Peru. Citibank was a favorite target of the MRTA, as were American chain restaurants. In many of these attacks, the MRTA gave warnings before setting off bombs. The MRTA's operations against chain restaurants are particularly well documented and offer the best window into MRTA tactics. The MRTA carried out at least six attacks on Kentucky Fried Chicken restaurants, on March 20, 1985 (when three restaurants were attacked simultaneously); June 5, 1990; February 2, 1991; and February 16, 1991.¹⁸ In the March 20, 1985 attacks, the MRTA used incendiary devices to destroy the restaurants. In the other attacks, MRTA members carried homemade bombs into the restaurants and warned patrons to leave immediately. *Cambio*, a Lima newspaper that functioned as the mouthpiece of the MRTA, recounted the February 2, 1991 MRTA operation that left "Kentucky In Ruins":

[F]our people arrived at the premises, three men and a woman, posing as customers. One of them placed a travel bag under a dining table, while the woman warned the dozen attendees to leave the premises, which "would be blown up in a few moments." With that said, the visitors and staff moved to safety, away from the premises, as the rebels took the moment to escape ... Four minutes later a tremendous explosion brought down the premises' cement structures, destroying tables, cabinets, and all furniture in the restaurant, without causing deaths (*Cambio* 1991a: 5).

A US State Department report recounts the February 16, 1991 assault on a Kentucky Fried Chicken restaurant and a Pizza Hut franchise that shared the same building:

Up to 13 well-dressed MRTA members simultaneously entered both restaurants and immediately disarmed the restaurant guards. Some of the terrorists then guarded the exits while others robbed the patrons and cash registers. Still others placed explosive

¹⁸Event counts taken from the Global Terrorism Database and US State Department (1990, 1991).

devices on the floors of both restaurants. After the explosives were in place, the terrorists ordered everyone to leave the premises (US State Department 1991).

The MRTA's bombs destroyed both restaurants without causing injuries.

The MRTA carried out symbolic actions against other targets as well. The period surrounding the United States-led Persian Gulf War was particularly significant. On January 25, 1991, the MRTA rocketed the facade of the US diplomatic embassy in Lima, leaving behind leaflets titled "Gringos out of the Middle East and Peru!!!" The leaflets previewed the MRTA's campaign against US business targets and symbols of US oppression, in solidarity with "the Iraqi people" and all "peoples of the third world" (*Ibid*, 9). The February 2nd and 16th Kentucky Fried Chicken attacks were part of this campaign, as were attacks on the North American Institute of Peru, a public statue of former US President John F. Kennedy (described by *Cambio* as "the smiling face of imperialism for Latin America"), and several of Peru's US Binational Centers (BNCs) for education (*Ibid*. 5).

The MRTA attacked BNC facilities frequently. Between June 25, 1987 and August 22, 1991, the MRTA attacked Binational Centers as many as sixteen times.¹⁹ The BNC attacks tended to occur at night or in the early morning hours when the buildings were less likely to be occupied. However, in certain daytime attacks, the BNC facilities did receive bomb warnings, by telephone or from MRTA members verbally as they overpowered security guards and began placing bombs inside the buildings (US State Department 1987, 1989, 1990, 1991).

The MRTA's campaign against American interests also extended to targeting Mormon places of worship. *Cambio* rationalized targeting the Church of Jesus Christ of Latter Day Saints (LDS) on the grounds of the Mormons' "North American origins and interests." Between Christmas day, 1989 and May 2, 1991, the MRTA carried out at least twenty-six bomb attacks against LDS churches. No one was killed in the attacks, and only two injuries are reported. The low casualty numbers are most likely attributable to the MRTA's choice to attack at night, when the buildings were likely to

¹⁹In some cases, no organization claimed responsibility for the attacks.

be empty. (The two injuries occurred during evening services, of which the MRTA may not have been aware prior to the attacks.) Documentary sources do not report any pre-attack warnings, but since the MRTA expected the buildings to be empty, warnings would have seemed unnecessary to those planning the attacks (US State Department 1989, 1990, 1991).

Which strategic incentives caused the MRTA to give warnings for some attacks but not for others? First, one should note that all pre-attack warnings were associated with attacks on property targets. The operational cost of giving warnings ($D_1 - D_2$) was relatively low in such cases because the physical target could not be moved out of the way after a warning was given. Second, the MRTA's own statements describe a concerted effort to reduce civilian casualties.

According to Miguel Rincón, the MRTA planned all of its attacks "to ensure that the blow only affected those it ought to affect" (Rincón 2002: 49). The MRTA fully intended to harm government officials and private contractors involved in counter-revolutionary efforts. Those people were attacked directly, without warning. But when the MRTA attacked symbolic targets – the bust of JFK, Citibank, Kentucky Friend Chicken, and the US Binational Centers – the MRTA primarily sought the spectacle of destroyed *yanqui* property ("Kentucky in Ruins," as *Cambio* put it). Killing civilian people inside that property was beside the point, and actually counterproductive because it undercut the MRTA's humanitarian appeals to would-be supporters.

Interviewed years later by the truth commission, MRTA leader Victor Polay explained that the MRTA chose more discriminate tactics to differentiate itself from the extreme violence of *Sendero Luminoso* and the "corporate and fascist" conduct of the government (Polay 2002: 41). The MRTA made sure to emphasize the discrimination of its attacks when claiming responsibility for them (via *Cambio*). Sparing civilians fit the MRTA's intended public image as the moderate revolutionary group, capable of drawing in reformist elements of the legal left even as it waged an armed campaign against the Peruvian state. As one demonstration of its moderation, the MRTA claimed to uphold the same international laws of war that state actors are obligated to uphold. One of the

MRTA's critiques of both the Peruvian government and *Sendero Luminoso* was that neither organization observed the Geneva Conventions. In the early 1990's, the MRTA sought the mediation of the International Committee of the Red Cross to negotiate the release of nine policemen captured by the MRTA in a raid. An MRTA agent contacted Red Cross officials in Geneva, requesting their assistance in addition to the assistance the MRTA had already sought from Catholic Church officials. In a public statement, the MRTA affirmed the Red Cross's view that the conflict in Peru "must be conducted with the strictest respect for the norms of international humanitarian law." *Cambio* touted the Red Cross's subsequent willingness to deal with the MRTA as "virtual recognition of the MRTA as a belligerent force by the Red Cross." According to *Cambio*, this was "a new and important factor" in the trajectory of the conflict (*Cambio* 1991b: 9). *Sendero Luminoso* could not claim Red Cross recognition, and such recognition placed the MRTA in elite company: At the time, the Nicaraguan Sandinistas and the Salvadoran FMLN were the only Latin American guerrilla organizations recognized as Geneva Conventions compliant. The Red Cross's recognition, and the government's unwillingness to participate in mediated negotiations, also gave the MRTA a moral stick with which to beat the Peruvian regime. Victor Polay stated at the time: "The government wants to keep the International Red Cross out in order to continue perpetrating its atrocities. ... When a government doesn't want the Red Cross [involved] it is because they are hiding atrocities" (*Idem*).

The MRTA's propaganda narrative depended on maintaining the moral high ground so that a wide cross-section of Peruvians would flock to the group's banner. No-warning bombings would have sabotaged the group's message and alienated those the MRTA sought to "awaken." The political cost (*X*) for causing excessive casualties was high.

4.4 *Sendero Luminoso*

Sendero Luminoso, on the other hand, showed no compunction about using extreme and indiscriminate violence. The group's no-warning car bombings on civilian targets in Lima offer a stark contrast to the MRTA's commercial bombings in the same city. On June 5th, 1992, *Sendero Luminoso*

exploded five bombs simultaneously, including a 1,200 pound truck bomb outside of the *Canal 2* television station, killing five people, wounding twenty, and knocking the TV station offline in mid-broadcast. On July 16 of the same year, *Sendero* cadres detonated a 1,000 pound car bomb on Tarata street in the affluent Miraflores neighborhood, killing twenty five people and wounding 155. On September 6, *Sendero Luminoso* detonated a 700 pound car bomb at a gas station, killing seven people and wounding ten.²⁰

These car bombs are just a small sample of *Sendero's* atrocities. Throughout the conflict, *Sendero Luminoso* showed a consistent pattern of violence toward civilians. Violence had an almost sacramental quality for the group. Abimael Guzmán spoke of a “blood quota” that *senderistas* and “the masses” would have to pay for the transformation of their society. *Sendero* cadres’ willingness to “cross the river of blood” showed their devotion to Guzmán and to his revolutionary vision, a belief system that was “all-powerful because it is true” (Willakuy 2004: 38, 326-327; Degregori 1992: 43). This belief system held that “the war itself forges the militant,” or in the words of one patriotic song, “Blood does not drown the revolution, but irrigates it” (McClintock 1992: 230).

Sendero Luminoso's logic of violence was essentially the reverse of the MRTA's: Rather than attacking symbolic targets and setting an example by sparing civilians, *Sendero* attacked civilian targets to make a symbolic example of them. *Sendero* was avowedly brutal toward the “class enemies” who stood in the way of Guzmán's campaign of purification. A 1980 *Sendero* communiqué spoke of “putting a noose around the neck of imperialism and reactionary forces; they will be grabbed by the throat, choked and, when necessary, strangled. The flesh of the reactionaries will wither and be shredded, and the black scraps will be submerged in the mud, what remains will be burned” (Willakuy 2004: 99). *Sendero* was also cruel toward “the masses” when they refused to participate in the revolutionary struggle. In one of the most infamous atrocities of the Peruvian conflict, *Sendero* cadres massacred 69 peasants in the town of Lucanamarca, which had resisted *Sendero's* attempts to reorganize it. According to Guzmán, the March 1983 massacre was

²⁰See UPI 1992; *Toledo Blade* 1992; Willakuy 2004: 70; and GTD incident summary: <http://www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtdid=199209060008>.

intended “to strike a massive blow and reprimand [the peasants], making them understand that they were dealing with another kind of people’s combatants, that they were not dealing with the kind of combatants that operated earlier... we were willing to do anything to gain everything” (Willakuy 2004: 129). Finally, *Sendero Luminoso* was not above sacrificing the loyal masses in the broader interest of remaking Peruvian society. Guzmán, for example, advocated provocative actions against Peru’s government, which had difficulty distinguishing *Sendero* guerrillas from the *campesino* populations in which they hid. By striking forcefully and melting back into the villages and towns, *Sendero* hoped to provoke collective punishment by the government, to “induce genocide” to expose the state’s oppressive nature and demonstrate the moral superiority of *Sendero*’s vision (Willakuy 2004: 38, 326-327). (The MRTA, in its few ill-fated forays into the country, wore military garb, specifically to prevent government retaliation against civilians.)

When *Sendero* brought its campaign from Ayacucho to Lima, the organization brought with it Guzmán’s philosophy of using extreme violence to shock, intimidate, or provoke. In its early attempts to gain a foothold in Lima, *Sendero* followed a strategy of infiltrating unions and social groups and attempting to place its members in leadership roles. The strategy failed, in large part because unions were dominated by mainstream, urban leftism like that of the MRTA. To gain traction, *Sendero* commenced a new effort to “lead the masses to resistance” with a campaign of agitation and intimidation, including a new tactic, the “armed strike” (Willakuy 2004: 157-158). Armed strikes were essentially general strikes forced upon city residents, particularly transit workers who would normally carry people on the way to their respective jobs. Those who violated the strike would be killed in exemplary fashion – in the case of some bus and taxi drivers, by being strapped into their vehicles and burned.²¹

At roughly the same time that it introduced armed strikes, *Sendero Luminoso* began a wave of no-warning car bombings in Lima (Willakuy 2004: 422). To understand *Sendero*’s use of the car bomb, one has to account for the group’s strategic position on the cusp of the 1990’s. *Sendero* had

²¹This insight drawn from an interview of a witness to one burning; see also Willakuy 2004: 168; Marks 1992: 196.

suffered major setbacks in rural areas, the heartland of its Maoist revolution. Peasants alienated by *Sendero's* brutality expelled the group's cadres from many areas. Sensing the shift of momentum away from *Sendero* in the countryside, Guzmán announced that the group had achieved "strategic equilibrium" and could now lay the groundwork for the final "Conquest of Power" in urban centers (Willakuy 2004: 158). In fact, Guzmán's strategy was a desperate one: convince cadres that victory is "just around the corner," destabilize a capitol city already reeling from economic and political crises, and provoke a United States intervention that would make *Sendero's* war a "war of national salvation" (Willakuy 2004: 161-163).

Although it was cloaked in Maoist revolutionary language, *Sendero's* shift toward the cities was actually a grand provocation, designed to make *Sendero* look stronger than it was, and Lima less stable than it was. The plan required spectacular attacks, and the car bomb was the perfect weapon. Completely indiscriminate when used without advance warnings, these car bombs caused substantial loss of life – five in the *Canal 2* bombing, twenty five in the Tarata bombing, and seven in the Lima petrol station bombing, to name just a few incidents. Although *Sendero* carried out grander atrocities outside of Lima, the car bombings came to symbolize the worst of *Sendero's* campaign to many Peruvians. This in itself validates Guzmán's analysis, that Lima was "a drum" to be beaten, and a "sound box" that would amplify what *Sendero* did and said, making the group seem stronger and more threatening to domestic and international audiences (Guzmán 2003: 17; Willakuy 2004: 80).

It is reasonable to ask whether *Sendero Luminoso* could have achieved the same publicity effects by setting off car bombs with warning. The IRA's bombs in London had gained international attention, despite killing very few people. Couldn't lower casualty car bombs in Lima have done the same? The answer is probably yes, but the question would only have arisen in *Sendero's* mind if the group had perceived a down side to killing large numbers of civilians in Lima. *Sendero* was quite willing to engage in civilian targeting generally, and in Lima, the group had even less reason to worry about the cost (*X*) of atrocities.

Simply put, Lima was not the *Sendero Luminoso* heartland. *Sendero* originated in the university community in Ayacucho among a largely *mestizo* (mixed European/native Peruvian) student population. Very often, these recruits were the first generation in their family to learn to read. A sagging rural economy, the rapid expansion of college education, and Guzmán's charismatic interpretation of Maoism combined to produce a uniquely radical result. *Senderismo* could never have emerged from Lima's political culture, which was more stable, ethnically more European, and more hospitable to a conventional rebel group like the MRTA. When *Sendero* began its campaign in Lima in the late 1980's, it was still drawing most of its support from rural bases. In this sense, *Sendero* was foreign to Lima's urban environs. Its situation was unlike that of the MRTA, which carried out bombings in its home community. As a student of Mao, Abimael Guzmán would have been quite familiar with the "fish and the sea" metaphor relating the local community to the guerrilla.²² For *Sendero Luminoso*, the "sea" was in Ayacucho. By committing atrocities in Lima, *Sendero Luminoso* was not polluting its own waters, but somebody else's. Facing no loss of core political support if it harmed civilians in Lima, *Sendero* faced a very low penalty (*X*) for excessive killing. As my theory predicts in such cases, *Sendero Luminoso* gave no warnings before setting off its car bombs.

4.5 Discussion

An astute analysis by the RAND Corporation observes that, compared to *Sendero Luminoso*, the MRTA enjoyed "a much broader base of natural appeal within Peruvian society." Because of its APRA pedigree and inclusive message, the MRTA could relate its own struggle to many other Peruvians' lives. At the same time, the MRTA's ideology was left "deliberately ill-defined" in an effort to incorporate reformist elements of existing institutions in both urban and rural areas. Driven by Guzmán's Manichean ideology, *Sendero Luminoso* shunned existing institutions and created "countervailing institution[s]" "from the bottom up," giving the group "a secure foundation among elements of Peru's rural population" (McCormick 1993: 52, 55). In essence, the MRTA

²²This metaphor was cited by nearly all IRA interviewees as a reason to avoid harming civilians in their home community.

sought a within-system revolution, attempting to rally support and seize control of existing institutions. Of course, a group intending to make broader political appeals can afford to offend fewer people, and its political cost for causing excessive casualties will be higher. *Sendero Luminoso*, seeking to destroy what existed and replace it with a new society, a society it was already building in the hinterlands, had a freer hand to target civilians outside its zone of control.

The broad similarities between the MRTA and *Sendero Luminoso* allow us to identify the sources of their divergent warning behavior very precisely. The difference cannot be explained by divergent operational costs of warning ($D_1 - D_2$) because they engaged in different behavior when attacking similar physical targets with bombs in Lima. Nor can the difference be explained by differences in the mobilization costs (G) that each could impose on the government. The MRTA gave its warnings directly to civilians, cutting the government out of the process completely. *Sendero* could have done the same, had it chosen to. The MRTA and *Sendero* adopted different warning behaviors because of different political costs for harming civilians. The group fighting on its own turf, with an ideology and mobilization strategy that required it to make broad political appeals, opted to warn. The anti-system revolutionaries, with a lesser degree of political accountability (particularly in Lima) opted not to warn, because the costs for harming civilians were dramatically lower.

4.6 Summary of Hypothesis Testing So Far

In general, my case studies of the IRA, ETA, the LTTE, *Sendero Luminoso*, and the MRTA uphold my theory of pre-attack warnings. The IRA, ETA, and the MRTA gave warnings because these groups perceived political costs (X) for causing excessive civilian casualties. The LTTE and Shining Path faced lower costs for causing civilian casualties, and neither group gave warnings. This result confirms H1, derived from my theoretical model.

Although sparing civilians was the primary purpose of IRA and ETA warnings, these groups also took advantage of the opportunity to impose additional costs (G) on the British and Spanish governments, via ambushes and the forced evacuation of commercial targets. The role of government

mobilization costs is harder to assess in other cases. The LTTE did not give warnings so estimating the government's costs is difficult. Although the MRTA did give warnings, it gave them to civilians directly, and the government played no role in evacuations. (This, in itself confirms a different prediction of the model, that a high cost for targeting civilians can justify pre-attack warnings even if there is no added utility from government mobilization.) With regard to H2, my case studies confirm it to the extent that the evidence will allow direct tests.

It is also true that the IRA, ETA, and the MRTA gave warnings only for attacks in which they sought to target property. In such cases, the operational cost of giving a warning ($D_1 - D_2$) is low, because the real target of the attack is an object or location, which cannot flee the attack if warned in advance. Targeting physical objects is not itself a sufficient condition for giving warnings, because the perpetrating group might be largely indifferent to civilian casualties (as the LTTE and *Sendero Luminoso* were). But the targeting of property is a common thread uniting the observed examples of pre-attack warnings. This evidence supports H3.

5 Quantitative Analysis

In this portion of my dissertation, I use statistical analyses to test hypotheses derived from my theory of warnings. Most fundamentally, I seek to determine whether the political cost of harming civilians motivates militant groups to give warnings (the logic of H1). A quantitative analysis allows me to test this hypothesis on a much larger universe of cases than I could using interview methods alone. It also allows me to test additional hypotheses. Some of these are refinements of H1. In order to test a theory about the costs of civilian targeting, one has to operationalize and measure the concept of “cost.” Where do costs come from, and how do we know if they are high? My case studies show that militant groups are politically vulnerable when they depend on local populations for shelter, recruits, and material support. In cases like that of the IRA, where militants are living in supporters’ homes, they must be very careful not to offend their hosts. The government’s level of human rights abuse sets an example for what may be considered offensive. As Lomperis (1996) argues, militants must win “the right to govern” by moral force, not brute force. A group that is highly dependent on local populations for support, and which fights a relatively non-abusive government, must be careful not to appear more atrocious than the state, lest local populations withdraw their support. This discussion yields two hypotheses, each a testable refinement of my original H1:

H1a: *Militants who depend heavily on local support are more likely to give pre-attack warnings.*

H1b: *Militants fighting a non-abusive government are more likely to give pre-attack warnings.*

My case studies also show that militant groups with maximalist goals (understood as the full takeover or dissolution of the existing political regime) may calculate political costs and benefits differently from groups with moderate aims. This issue arose in my case studies of the MRTA and *Sendero Luminoso*. Although the MRTA was a Marxist/Leninist group seeking to overthrow a pro-US capitalist regime, the MRTA adopted a conciliatory stance toward moderates and reformist elements of existing social institutions – even the Catholic Church. *Sendero Luminoso* sought to de-

stroy all existing institutions and replace them. A group that plans to destroy institutions has no need to placate them – to appeal to moderates or reformists whose offices the group plans to raze. In Abimael Guzmán's words, *Sendro Luminoso* could “do anything to gain everything”(Willakuy 2004: 129). Shapiro (2013: 152) notes a similar pattern in his comparison of Communist and Anarchist revolutionary groups in early 20th Century Russia. Unlike the Communists, who saw some portions of the political system as incrementally useful in advancing their revolution, the anarchists sought sweeping social change immediately. Given their hostility toward existing institutions, the anarchists “defined as a legitimate target anyone who profited from the existing economic system or protected it ... anyone who was an agent of the state, who had money, or who frequented an establishment serving the bourgeoisie and upper classes was a good target.” Shapiro quotes one historical anarchist as asking, “Would it make any difference which bourgeois one throws the bomb at?” This discussion leads to the following hypothesis:

H1c: *Militants with maximalist goals are less likely to give pre-attack warnings.*

There is a related argument in the academic literature on terrorism by religious organizations. Hoffman (2006: 89) writes:

[R]eligious terrorists see themselves not as components of a system worth preserving but as “outsiders” seeking fundamental changes ... This sense of alienation ... enables the religious terrorist to contemplate far more destructive and deadly types of terrorist operations ... indeed to embrace a far more open-ended category of ‘enemies’ for attack – that is, anyone who is not a member of the terrorists’ religion or religious sect.

By this logic, today's Islamist groups could justify indiscriminate attacks against non-Muslims, apostate Muslims, and Muslims who prop up westernized Arab regimes. Politically, it may be less costly for an Islamist group to engage in indiscriminate violence because the group does not intend to persuade people outside a small core group of fervent believers. Those believers share the militants' Manichean view of guilt and innocence, so they are unlikely to withdraw their support if the group engages in indiscriminate violence toward unbelievers. This discussion yields a fourth hypothesis:

H1d: *Religiously motivated militants are less likely to give pre-attack warnings.*

I test these hypotheses using a substantial amount of new data collected specifically for this project.

5.1 Research Design

My plan for the quantitative analysis is as follows. I use the START consortium's Global Terrorism Database (GTD) to identify a list of bombing incidents in which the perpetrating groups could have chosen to give warnings. I focus on attacks on civilians, because my case studies have shown that this is the only type of attack in which one might expect militants to give a warning. The case studies have also shown that not all groups give warnings when attacking civilians – and this is the interesting behavioral variation I hope to explain. Among all bombings of civilian targets, I further narrow my analysis to attacks by groups that carried out at least one hundred civilian bombing attacks. I filter the observations in this way because of a concern that short-lived or relatively “unproductive” militant groups (in the sense of producing bombings) may not achieve enough notoriety for historical news sources to carry detailed reports of their attacks. If groups do not draw sufficient press coverage (or sufficiently detailed coverage) I may not be able to “observe” their warnings, and this may bias my results. There is also a chance that filtering the observations in this way may introduce a different type of bias, particularly if the age or “productivity” of a militant group is somehow correlated with its propensity to warn. I have no reason to suspect this at the outset. However, in the concluding chapter, I do discuss the possibility of lowering the attack count threshold for inclusion as a subsequent extension of my research.

My case universe contains roughly 8,400 attacks by thirty-seven different organizations. I use news reportage from the *LexisNexis* database, State Department reports, the Global Terrorism Database's event summaries, and other historical material to determine whether the perpetrator of each attack gave a warning in advance. I consider a variety of sources to maximize my chance

of finding any information on an attack, which can then be cross-checked against other sources if the first source is too vague. Some militant groups do not receive as much coverage in *Lexis-Nexis*, for instance, because they operate in parts of the world without many English-language newspapers. In such cases, State Department reports can be a useful source to check, if the group carried out any attacks on US targets. The Global Terrorism Database summaries are particularly useful for coding more recent attacks, including in non-English speaking regions. Using a variety of available sources, and tasking research assistants to spend roughly six minutes coding each attack, I generated a database of roughly 4,700 “hits” – usable data points where secondary sources permitted a confident coding that there had or had not been a warning.

In addition to a dichotomous outcome variable indicating warnings, I incorporate data on groups’ access to foreign state support and territorial bases (factors making a group less dependent on local popular support). I also incorporate data on human rights abuses by each militant group’s target state. Finally, I incorporate information on the scope of groups’ political goals – changing the political system in place, or destroying it entirely. At the event level, I use logistic regression to determine whether these covariates predict warning behavior by the perpetrating group.

5.2 Operationalization and Measurement

Unit of Analysis

To establish a universe of cases, I filter all Global Terrorism Database (GTD) entries to include incidents where the attack type (*attacktype1*) is given as “Bombing/Explosion” and target type (*targettype1*) is a category other than “military,” “police,” “violent political party,” or “terrorists/non-state militia.”²³ In addition to focusing my analysis on cases where a warning might be observed, filtering observations in this way also conforms to the most common definition of “terrorism” as politically motivated attacks on civilian targets. Although I do not find it especially useful to debate which organizations are “terrorist” in character, I do believe that this unit of analysis makes

²³ Attacks on other security-related targets, such as intelligence agents, defense and judicial system bureaucrats, and heads of state are omitted when historical source materials identify these types of people as an attack’s primary target.

for more direct contributions to the academic literature on terrorism as a behavioral phenomenon and military tactic.

I use several other criteria to restrict my analysis to bombing cases where warning was a feasible tactic. These exclusion criteria are:

- Omitting attacks on “utilities” and “telecommunications” (according to GTD’s coding of target type). Many militant groups attack physical infrastructure (high tension power lines, mobile phone towers, etc.) in remote areas where there are no people to warn. No warning is possible (or necessary) so it does not make sense to include these bombings in the case universe.
- Omitting attacks on vacant buildings and other uninhabited sites. Militant groups may attack under-construction buildings, empty warehouses, and businesses “after hours.” Because there is little point to giving a warning in such cases, it does not make sense to include them.
- Omitting attacks where the weapon was a projectile (e.g. a mortar or rocket), a letter bomb, an incendiary device, a land mine, a noise bomb, or a leaflet bomb. (These attacks are identified based on the GTD’s *weaptype1* and *weapsubtype1* variable). In these incidents, a warning was either unfeasible (in the case of rockets, mortars, letter bombs, and mines) or unlikely to affect casualty counts (in the case of incendiaries, noise bombs, and leaflets), so it would not have made sense for the perpetrator group to give a warning.
- Omitting unsuccessful attacks (coded 0 by GTD’s *success* variable). Many of these attacks were thwarted before a warning could have been given — because the bombers were apprehended or because bombs (and bombers) detonated prematurely. GTD’s unsuccessful attacks also include cases where undetonated explosives were found, but it is unclear whether the perpetrator intended to detonate them or whether they merely dumped them at a location after calling off a planned attack. In any of these scenarios, we have no way of “observing” warnings. Moreover, we cannot necessarily discern the perpetrator’s intended target, to

determine whether it was civilian or military in nature. I deal with these information problems by excluding attacks coded as unsuccessful by the GTD. In excluding them, I avoid biases that might result from bundling military attacks into the analysis, or coding attacks as non-warning when in fact the perpetrator intended to give a warning. It is possible, however, that leaving the attacks out also introduces bias – for instance, if many of the unsuccessful attacks failed *because a warning was given*. The information available on GTD’s failed attacks is generally vague, so it is difficult to determine how many attacks fit this description. By excluding unsuccessful attacks, I may lose some actual or intended warnings from the dataset. This is a worthwhile tradeoff, because including unsuccessful attacks would introduce data points I already know to be problematic.

As noted above, I restrict the analysis to include only attacks by groups that carried out at least 100 bombings – 37 groups in total. This restriction excludes groups whose limited notoriety decreases the coverage their attacks receive in newspapers and other historical sources used to code the dependent variable (warnings). Regardless of whether a group gives a warning, a lower level of press interest means fewer news stories (and fewer words per story) on any given attack by that group. A lack of press interest creates a form of (under)reporting bias that would understate the number of warnings given by less prolific militant groups. The 100 bombing criterion reduces the possibility of such bias. The groups included in my sample are:

- Abu Sayyaf Group
- African National Congress
- Al-Qa’ida in Iraq
- Al-Qa’ida in the Arabian Peninsula
- Al-Qa’ida in the Lands of the Islamic Maghreb
- Al-Shabaab
- Armenian Secret Army for the Liberation of Armenia (ASALA)
- *Euskadi Ta Askatasuna* (ETA)
- Boko Haram
- Communist Party of India - Maoist (CPI-M)
- Corsican National Liberation Front (FLNC)

- Corsican National Liberation Front (FLNC) Historic Channel
- Dev Sol
- Farabundo Marti National Liberation Front (FMLN)
- First of October Antifascist Resistance (GRAPO)
- *Fuerzas Armadas de Liberación Nacional* (FALN)
- Hamas
- Hizballah
- Irish Republican Army (IRA)
- Kurdistan Workers' Party (PKK)
- Liberation Tigers of Tamil Eelam (LTTE)
- Movement of April 19 (M-19)
- Manuel Rodriguez Patriotic Front (FPMR)
- Moro Islamic Liberation Front (MILF)
- Movement of the Revolutionary Left (MIR - Chile)
- National Liberation Army of Colombia (ELN)
- National Union for the Total Independence of Angola (UNITA)
- New People's Army (NPA)
- Nicaraguan Democratic Force (FDN)
- Palestine Liberation Organization (PLO)
- Palestinian Islamic Jihad
- Revolutionary Armed Forces of Colombia (FARC)
- *Sendero Luminoso* (Shining Path)
- Taliban (Afghanistan)
- Tehrik-i-Taliban Pakistan (TTP)
- Túpac Amaru Revolutionary Movement (MRTA)
- United Liberation Front of Assam (ULFA)

My dataset covers the years 1970 through 2012, with 2013 and 2014 data to be added in a future update. The independent variables I code for these incidents include:

Dependent Variable: *Warning*

My dependent variable is a dichotomous 0/1 indicator of whether the perpetrator group gave a

warning in advance of the attack. “Warnings” are defined as some form of advance notice given about the specific attack in question, including telephone calls to police or emergency services, phone calls to the owners of targeted businesses, in-person warnings to people at the scene informing them of the presence of a bomb and instructing them to leave, and notes placed at the scene indicating the presence of a time bomb. Another tactic counted as warning is the forcible removal of people at the scene of an attack — for instance, disarming a security guard and leading her/him away from the targeted location at gunpoint. Non-specific “threats” are not counted as warnings, however. Examples include informing a business owner that if s/he does not pay protection money, the business will be bombed; issuing statements promising bomb attacks if the government does not grant a concession; and promising to attack people who vote or defy an “armed strike” declared by militants. Those restrictions notwithstanding, categorical warnings are counted. Examples include a promise to bomb polling places or state-run universities during a specific week; warning women to stay away from a particular mosque during a specific week; and telephone calls and online messages promising attacks in a particular town at a specific hour.²⁴

I employed undergraduate research assistants to code the warning variable, based on a detailed search and coding protocol. The protocol provided research assistants with a set of search terms to enter into the *Lexis Nexis* news database, a searchable electronic database containing newspaper, magazine, radio, television, and news wire reportage from American and international media sources. Research assistants specified a date range for each search: one day before the bombing event through two days after the event. Specifying the time window in this way maximizes the chance of “observing” both the bombing itself and any mention of warnings given prior to the bombing in news coverage of the event. The search terms themselves included the common name (or names) of the group, the boolean term “bomb!” and the term “warn!”. If these searches failed to generate hits, research assistants widened the search by removing the term “warn!,” using any

²⁴Categorical warnings are noted using a dummy variable, *non-specific*, with a *comment* field explaining the nature of the warning and why it was included. The *non-specific* field is also used to identify general warnings that were not included, with comments explaining the nature of the warning and the reason for its exclusion.

hits to confirm that a bombing had taken place and that *no* warning had been given.²⁵ In cases where *Lexis Nexis* contained no information on a bombing, research assistants used other sources to find information about the events: the US State Department's yearly *Significant Incidents of Political Violence Against Americans* reports, as well as the Global Terrorism Database's own "summary" field, which contains a brief summary of certain bombing incidents – typically those occurring in recent years and those affecting American targets. Using these procedures, research assistants were able to code 4,670 of the 8,413 bombings in the case universe.

Independent Variables

I use my case studies to inform the operationalization of my theory's independent variables. The most important factor affecting militant warning behavior is the political cost of causing civilian casualties. In the IRA, ETA, and MRTA case studies, the cost of killing civilians was largely determined by a group's dependence on voluntary support from local communities. If nationalist community members had denied the IRA access to their homes, the group would have been apprehended and imprisoned *en masse*. ETA's political legitimacy among Basques was heavily dependent on its adherence to "revolutionary ethics." When it violated the ethical principle of civilian immunity, the Basque public aligned with anti-ETA Spanish parties, freezing the group out of political negotiations that could otherwise have helped the group to achieve its goals. The MRTA's political strategy depended on raising popular support among urban moderates. Without a major presence in the country's interior, the tiny group operated clandestinely in cities, carrying out armed propaganda to mobilize "the masses." By attacking *yanqis* and the government, and sparing innocent Peruvian citizens, the group hoped to mobilize a broad coalition of students, labor activists, and reformist Catholic clergy. Because of their material and political dependence on local populations, these three groups were obliged to uphold local people's norms of revolutionary conduct.

The LTTE and *Sendero Luminoso* were not so obliged. We can trace the relative autonomy of these

²⁵Research assistants were also instructed to broaden the search even further if necessary, simply searching for the name of the perpetrator group in news coverage within a week of the attack.

group to specific factors – for instance, the groups’ control of territory where they could raise taxes and recruit coercively. The LTTE also benefited from the support of Indian intelligence agents who trained and equipped the group. These two factors, territorial strongholds and foreign state support, made these groups much less dependent on local support. Without that dependence, the LTTE and *Sendero* could afford to violate the humanitarian norms of local populations.

I operationalize the material and political autonomy of militant groups in terms of their access to territorial strongholds and state support. I measure these factors using information from the Big Allied And Dangerous (BAAD 1) dataset created by (Asal and Rethemeyer 2008b). Specifically, I use the following variables:

- *TerrStrong* – a 0/1 dummy variable indicating whether a militant group possessed a territorial stronghold on the territory of the target state or outside the state’s borders. The BAAD 1 database has a single coding for each group, applied to all years covered in the database (1998-2005). My dataset includes the years 1970-2012, so some groups in my analysis do not appear in the BAAD 1. I have created my own codings of the *TerrStrong* variable for those groups, based on the START consortium’s Terrorist Organization Profiles (Memorial Institute for the Prevention of Terrorism (MIPT) N.d.) and secondary historical literature on each group. My codings of each group are listed in the quantitative analysis portion of the appendix.
- *Statespond* – a 0/1 dummy variable indicating whether a group was supported by a national government, with the same coding applied to all years of that group’s existence. For groups not included in the BAAD database due to the database’s date range, I have coded the variable based on TOPS profiles and other secondary literature. (See the appendix for the codings of all 37 perpetrator groups.)

I sum the values of the BAAD’s *TerrStrong* and *Statespond* to create a single variable, *Autonomy*, with whole number values ranging from 0 to 2. This variable represents a militant group’s relative autonomy from local populations who might provide it with material, financial, or political

support. Summing the BAAD's variables into a single *Autonomy* measure captures the intuition that a group with a stronghold *and* state support is even more autonomous than a group with only a stronghold or a state patron. It also reduces the number of dummy variables in the regression model, and therefore the potential for multicollinearity among two or more of the dummies. I report logit results using the original BAAD dummy variables in the appendix, showing that their transformation into a single variable has not substantially changed my findings.

In addition to the *Autonomy* variable indicating the perpetrator group's relative independence or dependence on local support, I include a variable expressing the extent of human rights abuse by the militant group's target state. Humanitarian abuses by the government are another permissive factor, which may decrease the group's political costs for harming civilians. Recalling the IRA case study, Danny Morrison explained that Irish nationalists "weren't that oppressed," and there could be no justification for "indiscriminate actions" by the IRA. In the LTTE case, however, the Black July pogroms and the Sri Lankan government's apparent complicity helped convince Tamils that the LTTE's attacks on civilians were "a necessary evil," in the words of M.A. Sumanthiran. Government abuses give a militant group political maneuvering room, helping it to justify its own indiscriminate attacks, if it chooses to carry them out. To represent this permissive factor, I include a variable from another existing database:

- Political Terror Scale (*PTS*) – a five point scale indicating the degree of human rights abuse perpetrated by a state within its borders. Developed by Gibney (2015), the Political Terror Scale assigns scores to each state, ranging from 1 to 5. A PTS score of 1 indicates that abuses such as torture are "rare or exceptional;" a score of 5 indicates that abuse "has expanded to the whole population," and that leaders "place no limits" on the coercive tools they use to shape citizens' behavior. The PTS score for each state is based on US State Department and Amnesty International yearly reports on human rights abuse. There are two variants, "S" (coded from State Department reports) and "A" (coded from Amnesty International reports). The scores are largely congruent. I rely on the "A" version, except in cases where the lack of Amnesty International data prevented the PTS researchers from assigning a score to a

particular country. In such cases, I use the PTS “S” version’s score for the country in that particular year. For each incident in my dataset, code the variable *PTS* to indicate the PTS score of the militant group’s target state. I define “target state” as the state the militant group is attempting to coerce. For instance, the target state of Hamas is Israel; the target state of Shining Path is Peru; the target state of the African National Congress is South Africa. The target state is usually but not always the state in which the physical attack takes place. ETA attacks on French soil, for instance, are still part of a campaign to coerce Spain, and as such are coded with the PTS score of Spain during the year of the attack. In the appendix I provide a table showing each militant group in association with its target state, whose yearly Political Terror Scale score is given in the *PTS* field for all of that group’s attacks in a given year. Because the original Political Terror Scale only covers the years 1976 to the present, I extrapolate a *PTS* score to any attack carried out in the years 1970-1975. My coding rule for these attacks is to apply the target state’s Political Terror Scale coding for 1976 to attacks in 1970-1975. There are only 73 such attacks in my dataset, 72 of which targeted the US and UK, countries that scored “1” in 1976 and nearly all other years. The one remaining incident was an ETA attack on Spain, which in 1976 scored a “2” – the country’s modal and median score for all other years in the original dataset. Given the consistency of these countries’ scores, I am confident that my extrapolation for the years 1970-1975 does not bias my results.

In addition to these variables indicating the militant group’s degree of autonomy from local populations, I include two variables characterizing the group’s motivations and political goals. These are:

- *Maximalist* – a 0/1 dummy variable indicating whether the perpetrator group’s political goal is complete takeover or dissolution of the state, as opposed to a limited goal like secession by an ethnic enclave. This variable is coded primarily based on TOPs profiles. Groups coded “1” for *Maximalist* include Islamists like Al Qa’ida in Iraq (seeking a regional caliphate that replaces the Westphalian state system) and the African National Congress (seeking the dissolution and replacement of the apartheid system). Ethnic secessionists like the IRA, ETA, and the LTTE are coded as “0,” having a limited political aim that can be granted by the

target state without a need for regime change or the dissolution of the state itself. Maoist and Leninist groups are generally coded “1” because of their sweeping transformative aims. (Although the MRTA appears to be a very moderate group in comparison with *Sendero Luminoso*, my coding rule classifies the MRTA as maximalist.) A full list of *Maximalist* codings may be found in the appendix.

- *Religion/Islam* – a 0/1 dummy variable indicating whether the group’s violent campaign is motivated at least in part by religion. This variable is imported directly from the BAAD database. The database’s *ContainRelig* variable indicates whether a militant group is motivated at least in part by religion. The database assigns a single coding to each group for all the years of its existence. For groups whose campaigns did not overlap the database’s coverage, I have assigned a coding based on TOPs profiles and other secondary sources. Because of the groups and years covered by my dataset, the only religiously motivated groups are motivated by Islam. For clarity, I name the variable *Religion/Islam*. I give a list of *Religion/Islam* codings in the appendix. It is important to note that the *Religion/Islam* variable does not differentiate groups that are motivated only by religion from groups that are only in part motivated by religion. Nor does it imply maximalism by religious groups. A group like Hamas, for instance, could be both religious and limited in its political aims, seeking the independence of Palestine, but not necessarily the establishment of a regional Islamic caliphate. As such, it can be appropriate to include the *Maximalist* and *Religion/Islam* variables in the same regression model.

For exploratory purposes and as controls, I create a set of dummy variables indicating the types of targets attacked in each bombing. It is possible that the probability of pre-attack warnings differs depending on the nature of the target – or that the inclusion of these variables changes the substantive or statistical significance of one of the main variables related to militants’ costs for harming civilians. These dummy variables are derived from the GTD’s *targettype* variable, which I have recoded to reduce the number of categories:

- *Tourists* – attacks for which the GTD’s *targettype* specifies the target as “Tourists.”

- *Business* – attacks for which the GTD’s *targettype* specifies the target as “Business.”
- *Government* – attacks for which the GTD’s *targettype* specifies the target as “Government (Diplomatic)” or “Government (General).”
- *PrivateCitizens* – attacks for which the GTD’s *targettype* specifies the target as “Private Citizens & Property.”
- *CivilSociety* – attacks for which the GTD’s *targettype* specifies the target as “Educational Institution,” “Journalists & Media,” “Religious Figures/Institutions,” or “NGO.”
- *Infrastructure* – attacks for which the GTD’s *targettype* specifies the target as “Airports and Aircraft,” “Maritime,” “Transportation,” or “Food or Water Supply.”

The GTD’s *targettype* variable also indicates that some attacks were directed toward “Other” and “Unknown” targets. Estimating coefficients on these target types would mean very little, so in specifications using target type dummy variables, I omit attacks on “Other” and “Unknown” targets. Unless otherwise noted, models containing the target type dummy variables use *Government* as the base category. (Correlationally, this is the category of attack *least* associated with warnings by the attacking group.)

I include a dummy variable, *Europe*, indicating whether an attack took place on the European continent. The variable is based on the GTD’s *region_loc* variable, which includes codes for attacks in both Eastern Europe and Western Europe. My dataset includes 596 attacks in Western Europe and only one in Eastern Europe. Combining these into a single category gives a dummy variable, *Europe*, with 597 “1” values and 2,626 “0” values indicating attacks in other regions. I use *Europe* to test an alternative theory – albeit a crude one – to explain why we see pre-attack warnings in some cases but not in others. The theory, simply put, is that Europeans give pre-attack warnings, for some reason related to their European cultural lineage. This is an idea raised repeatedly in informal conversations with political scientists and others who wanted to know “Is it just the IRA and ETA” (and perhaps some Corsicans) who do this? I have already discussed one Latin American group, the MRTA, which gave pre-attack warnings in many cases. I include *Europe* in

various model specifications to determine whether there is something distinctive about European attacks – and if so, to determine what it might be.

Finally, I use the GTD's dummy variable, *Suicide*, to indicate whether a particular bombing used suicide tactics. I use this variable as a control, reasoning that the decision to use suicide tactics may have some bearing on the decision to give a warning. Assuming that a certain percentage of suicide attacks are motivated by a desire to get as close as possible to a target, one would expect fewer warnings in cases of suicide attack. One might also expect fewer warnings if, as Hoffman and McCormick (2004) argue, militants use bloody suicide attacks to signal high levels of resolve. I use the *Suicide* variable to determine whether these intuitions hold true.

5.3 Model Specification

I estimate a logit regression model because my dependent variable, *Warning* is a dichotomous, probabilistic outcome. A logit model has advantages over linear probability models because the sigmoidal functional form constrains the model's predictions to the interval (0,1) on which probabilities are defined. A logit model will never predict negative probabilities or probabilities greater than 1. The formula for the logit model is as follows, where i is the number of independent variables, β_i is the logit coefficient for x_i , and F is the predicted probability of a positive outcome (in this case, a pre-attack warning):

$$\frac{F(x)}{1 - F(x)} = e^{\beta_0 + \dots + \beta_i x_i}$$

The logit coefficients (β_i) must be transformed before they can be interpreted substantively. Intuitively, however, a positive logit coefficient indicates that an incremental increase in x_i increases the probability F of the event taking place. A larger positive coefficient indicates a larger positive effect of x_i on the probability F . The model's substantive predictions can be obtained using the

following formula, where $\beta_0 + \dots\beta_ix_i$ is the vector of logit coefficients estimated by the model:

$$F = \frac{1}{(1 + e^{-(\beta_0 + \dots\beta_ix_i)})}$$

This formula may be used to calculate marginal effects, instantaneous changes in the predicted probability of a pre-attack warning, at a particular value of x_i . The formula also gives predicted probabilities of observing a pre-attack warning, given any combination of x_i values. In the following pages, I explore the raw logit results, marginal effects, and predicted probabilities, focusing most heavily on the latter as a way of understanding the model's substantive predictions for when we are likely to see pre-attack warnings.

I use several model specifications. Model 1, the most basic, contains only the variables *PTS* and *Autonomy*, representing the permissive factors that may reduce a group's political costs for harming civilians. Model 2 includes *PTS*, *Autonomy*, and *Maximalist*. A maximalist group with no intention of preserving existing institutions will have relatively low political costs for harming civilians. Model 3 includes *PTS*, *Autonomy*, *Maximalist* and *Religion/Islam*, another variable that may indicate a low valuation on existing institutions and a correspondingly low political cost for harming civilians. Model 5 includes these variables plus the control variable *Europe*. Model 6 adds the final control variable, *Suicide*.

Given the construction of my variable measures, my theory leads me to expect the following:

- Higher values of *PTS* will be associated with a lower predicted probability of warnings (confirming Hypothesis 1a)
- Higher values of *Autonomy* will be associated with a lower predicted probability of warnings (confirming Hypothesis 1b)
- "1" values of *Maximalist* will be associated with a lower predicted probability of warnings (confirming Hypothesis 1c)

The conventional wisdom about religious militancy suggests that “1” values of *Religion/Islam* will be associated with a lower predicted probability of warnings (confirming Hypothesis 1d). The conventional wisdom about European militancy suggests that “1” values of *Europe* will be associated with a higher probability of warnings. Given the likely premium on surprise in suicide attacks, I expect “1” values of *Suicide* to be associated with lower probabilities of warning.

To confirm these hypotheses confidently, the predictions should hold even with the introduction of the target type type dummy variables. The coefficients on the target type dummies will take on positive or negative values depending on which dummy is omitted to serve as the base category for comparison. Having spoken with IRA and ETA members about the legitimacy of targeting the state versus targeting civilians, I expect the *Government* dummy to be associated with the lowest probability of warnings. I leave *Government* out of the model to serve as the base category, so I expect the coefficients on all other target dummy variables to be positive.

In each model specification, I cluster standard errors on the perpetrating group. This is intended to account for the correlation in standard errors among observations taken from the same militant group. The intuition is similar to that of an elections scholar using survey data from many people, some of whom may be living in the same households. Clustering standard errors relaxes the assumption that each observation’s standard errors are independently and identically distributed. In reality we expect there to be some relationship between answers given by members of the same household. We also expect there to be some relationship between the decision to warn or not to warn, if made by members of the same militant group, in an attack today versus an attack a year from today.

Table 1: Logit Results

Probability of Warning	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>PTS</i>	-0.7234*** (0.20)	-0.3715* (0.20)	-0.1738 (0.31)	0.1991 (0.32)	0.2086 (0.32)	0.1647 (0.29)
<i>Autonomy</i>	-1.0480** (0.47)	-1.173** (0.47)	-1.299** (0.57)	-0.8104** (0.32)	-0.7956** (0.31)	-0.9106*** (0.29)
<i>Maximalist</i>		-1.430** (0.71)	-1.550** (0.61)	-1.001* (0.54)	-1.029* (0.54)	-0.8155* (0.46)
<i>Religion/Islam</i>			-0.7966 (0.67)	-0.0624 (0.54)	0.0335 (0.56)	0.0701 (0.51)
<i>Europe</i>				2.281*** (0.83)	2.284*** (0.83)	2.409*** (0.78)
<i>Suicide</i>					-0.6240 (0.58)	-0.9228* (0.55)
<i>PrivateCitizens</i>						0.0095 (0.44)
<i>Business</i>						0.2451 (0.37)
<i>CivilSociety</i>						1.161*** (0.44)
<i>Infrastructure</i>						1.160*** (0.41)
<i>Tourists</i>						1.769*** (0.54)
Constant	-0.0616 (0.47)	-0.2728 (0.43)	-0.4076 (0.40)	-0.2897 (0.86)	-2.881*** (0.87)	-3.267*** (1.0)
<i>N</i>	3,223	3,223	3,223	3,223	3,223	3,152
Log Likelihood	-730.417	-707.451	-701.416	-673.985	-673.016	-626.266
Wald χ^2	44.00	38.05	35.83	46.25	48.89	680.98
Pseudo R^2	0.2578	0.2811	0.2873	0.3152	0.3161	0.3422

*p<0.1; **p<0.05; ***p<0.01; Standard errors clustered on perpetrator group

5.4 Results

Table 1 gives the logit results obtained using six different model specifications. Although the raw coefficients cannot be interpreted substantively, they give a general picture of each model's predictions, including the direction of each variable's effect (positive or negative) and the statistical significance of that effect. The results are generally consistent with my theory and hypotheses, with one important exception I discuss in detail below. The coefficients on *Autonomy* are negative in all model specifications and statistically significant at a 0.05 α -level or better. *Autonomy* – as provided by state support or territorial strongholds that make a group less dependent on local popular support – is associated with a decreased probability of pre-attack warnings. This confirms Hypothesis 1a. The coefficient on *Maximalist* is negative in all model specifications, and significant at a 0.1 α -level or better. Militant groups whose goals assume full takeover of the state, destruction of the state, or the broad replacement of social institutions are less likely to give pre-attack warnings. This supports Hypothesis 1c.

The results for *PTS*, my measure of government humanitarian abuse, are more complicated. The coefficients on *PTS* are negative in Models 1-3. This would support Hypothesis 1a, that higher levels of government humanitarian abuse will be associated with a decreased probability of pre-attack warnings. However, in Models 4-6, the coefficient on *PTS* takes on a positive sign. A higher level of human rights abuse by the government is associated with an *increased* probability of warnings. This contradicts Hypothesis 1b, but the result makes sense in light of the estimation results for the control variables *Religion/Islam*, *Europe*, and *Suicide*.

The variable *Religion/Islam* has a negative coefficient when introduced in Models 3. This is consistent with H1d, that groups motivated in whole or in part by religion will be less likely to give pre-attack warnings. The result is not statistically significant, but the introduction of *Religion/Islam* attenuates the negative coefficient on *PTS* by about half. *PTS* and *Religion/Islam* are strongly correlated, with a Pearson pairwise correlation coefficient of 0.415 (see Table 2 below). Countries with high levels of government terror are likely to produce (or be selectively targeted by) Islamic

militants. Introducing *Religion/Islam* causes the logit model to assign some of the negative effect previously attributed to *PTS* to *Religion/Islam* instead. (The model also attributes even greater negative effects to *Autonomy* and *Maximalist*.)

Table 2: Pearson Correlation Matrix

	<i>PTS</i>	<i>Autonomy</i>	<i>Maximalist</i>	<i>Religion/Islam</i>	<i>Europe</i>	<i>Suicide</i>
<i>PTS</i>	1.0000	0.6069	0.6293	0.4150	-0.8095	0.1798
<i>Autonomy</i>		1.0000	0.3393	0.3427	-0.5518	0.1943
<i>Maximalist</i>			1.0000	0.2347	-0.5739	-0.0026
<i>Religion/Islam</i>				1.0000	-0.3980	0.3321
<i>Europe</i>					1.0000	-0.1606
<i>Suicide</i>						1.0000

Looking again at Table 1, the sign on *PTS* changes to positive with the introduction of *Europe* into the specification in Model 4. *Europe* exerts a positive and statistically significant effect in all specifications that include it (Models 4-6). The coefficient on *PTS* is *positive* whenever *Europe* is in the specification, because the pattern of *PTS* scores correlates so highly with location. Five militant groups in my sample are paired with European target states: the IRA (United Kingdom), ETA and GRAPO (Spain), and the FLNC and FLNC-Historic Channel (France). Each of these groups gives warnings at a relatively high rate. The UK, Spain, and France also have generally low Political Terror Scale ratings – averaging 1.78, 2.25, and 2.22, respectively. Spain’s relatively high *PTS* score (by European standards) is an outlier, most likely owing to Spain’s unusually long period of fascist rule under military dictator Francisco Franco (from 1936 to 1975). The fact that a country still emerging from fascism produced two prolific militant groups (both of which give warnings at high rates), means that within Europe, higher political terror levels are associated with higher frequencies of warning. Outside of Europe, however, high *PTS* scores are associated with lower frequencies of warning, exactly as predicted by my theory and H1b. Looking at Models 1-3, where *Europe* is not a control variable, the effect of *PTS* on warnings is *negative*. But once *Europe* is introduced, the Spanish case reverses the apparent relationship between humanitarian abuse by

governments and warning behavior by militants.

Model 5 introduces the variable *Suicide* as a control. The coefficient on *Suicide* is negative, although not statistically significant. The introduction of the variable makes very little difference in the coefficients on other variables previously introduced in Models 1-4, except for *Religion/Islam*. With *Suicide* in the specification, the coefficient on *Islam* is now *positive*, although very small and not statistically significant. One way of interpreting the change in *Religion/Islam*'s coefficient is to remember that until their defeat in 2009, the LTTE used suicide tactics very frequently. *Religion/Islam* is negatively correlated with the outcome of warning. *Suicide* is even more negatively correlated with warning, but positively correlated with *Islam*. Introducing *Suicide* in addition to *Religion/Islam* allows the model to account for suicide attacks by secular groups such as the LTTE. Specifications 3-4 attributed a negative effect to *Religion/Islam* based on many non-warning attacks by groups that use suicide tactics some of the time. But adding *Suicide* causes the model to attribute that negative effect not to *Religion/Islam* but to the tactic of suicide bombing itself.

Turning to Model 6, the results are broadly similar to those of Model 5. The coefficient on *Autonomy* is negative and statistically significant at a 0.01 α -level. The coefficient on *Maximalist* is negative and statistically significant at the 0.1 level. *Europe*'s coefficient is positive and significant at a 0.01 α -level. *PTS* and *Islam* exert positive, though statistically insignificant effects. One change is that *Suicide* exerts a stronger effect, which is now statistically significant at a 0.1 α -level. Broadly, however, the results are strikingly stable, comparing Models 5 and 6, despite the introduction of the five target type dummy variables in Model 6.

Of the target type dummy variables, the base category (*Government* – not shown) is least likely to receive pre-attack warnings. The progressively higher coefficients on *Private Citizens*, *Business*, *Civil Society*, *Infrastructure*, and *Tourists* indicate that each category is more likely to receive a warning (compared to *Government* and to categories with lower coefficients). These dummy variables contribute explanatory power to the model, bringing the Pseudo- R^2 to 0.3422 (allowing for the

exclusion of 71 attacks on “Unknown” and “Other” attacks so that a more meaningful base category could be used). The target type dummy variables allow for more specific predictions about the probability of a warning, based on the type of person or thing attacked in a given bombing, as well as the political and regional variables included in the other model specifications. Introducing the target type dummy variables did not substantially change the coefficients or significance levels of the variables already introduced in Model 5. This suggests that the logit model’s results are relatively robust. Once all of the relevant political variables are included, the introduction of variables specific to the attack do not change the coefficients substantially.

Interpreting these coefficients is straightforward mathematically. The predicted probability (F) of a pre-attack warning is given by the formula $F = \frac{1}{(1+e^{-(\beta_0+\dots+\beta_i x_i)})}$, where β_i is the coefficient estimated for independent variable x_i . For the estimated probabilities to mean anything, however, one must put the right x_i values into the formula. It would be possible to calculate a predicted probability of warnings for suicide attacks by religious militants in countries with *PTS* scores of 1. But the dataset includes no such attacks, so the prediction does not correspond to any real-life scenario we have observed before. Some scenarios are outlandish – for example, calculating predicted probabilities for attacks on European target states with *PTS* scores of 5. There is no such country in my sample, in any year (and the mean *PTS* value associated with attacks in Europe is 1.97).

Looking at the variables in this dataset, Europe is a distinctive region. Its indigenous militants (groups whose target states are in Europe) are ETA, the FLNC and FLNC Historic Channel, GRAPO, and the IRA. Each group has an *Autonomy* score of 0, a *Maximalist* score of 0, a *Religion/Islam* score of 0, and a very low average value of *PTS* associated with its attacks: 2.23 for ETA, 1.95 and 1.86 for FLNC and FLNC Historic Channel, 1.96 for GRAPO, and 1.66 for the IRA. Of the 597 geographically European attacks in my sample, only sixteen were carried out by groups other than these. Hizballah carried out five attacks (one of them a suicide bombing – the only European suicide bombing in my sample). The other eleven were carried out by the Armenian Secret Army for the

Liberation of Armenia (ASALA), an essentially stateless militant group whose primary target state is Turkey. This is the extent of the diversity in Europe. Table 3 makes the point clearly. The non-zero average of *Autonomy* in Europe is due to the handful of attacks by Hizballah (*Autonomy*=2) and ASALA (*Autonomy*=1). The non-zero values of *Religion/Islam* and *Suicide* are attributable to Hizballah. The non-zero *Maximalist* average is attributable to the Marxist/Leninist GRAPO's attacks.

Table 3: Variable Means, Europe and Non-Europe

	Europe	Non-Europe
<i>PTS</i>	1.968	4.377
<i>Autonomy</i>	0.0352	1.2048
<i>Maximalist</i>	0.0385	0.7548
<i>Religion/Islam</i>	0.0084	0.5141
<i>Suicide</i>	0.0017	0.1283

The relative homogeneity of European militant groups makes it difficult to compare marginal effects between European and non-European cases. For instance, we might want to know how the *Maximalist* score of the perpetrator group affects the probability of warnings in an attack in Europe versus an attack outside of Europe. To calculate predicted values, we must assume values of *Autonomy*, *Religion/Islam*, *Suicide*, and *PTS*. As mentioned earlier, the only maximalist group to attack in Europe is GRAPO, with an *Autonomy* score of 0. A realistic cross-regional comparison using *Maximalist* would be restricted to comparing hypothetical groups like GRAPO to other hypothetical groups with *Autonomy* scores of 0. In Europe, this would include ETA, FLNC, FLNC Historic Channel, and the IRA (restricting the comparison to cases where *Religion/Islam*=0 and *Suicide*=0 by implication). The only *PTS* value observed in European *and* non-European cases fitting the above description is 2. However, among non-European cases, the only bombing by a non-maximalist group is actually an IRA attack – the group's sole non-European bombing, carried out in the United States (which arguably, is not that different from Europe anyway). We can still gen-

erate point estimates and graphs, but substantively they do not mean much.²⁶

The difficulty in making cross-regional comparisons based on my model and data actually illustrates a broader point. Bombings in Europe are distinctive because important political variables take on such drastically different values in Europe compared to the rest of the world. There may be some aspect of European culture that makes militants in Europe give warnings at a higher rate. (This is the logic of the informal theories that come up in casual conversation.) Upon examining the data however, there is enough cross-regional difference in political variables – government human rights records, the lack of territorial bases or state support for Europe’s militants, the small number of maximalist groups operating in the area – we need not reach for cultural explanations so quickly.

Although we cannot easily compare the logit model’s predictions across regions, we can compare them within regions. To facilitate that within-region analysis, Table 4 presents separate logit models estimated on European and non-European cases. The vector of independent variables is identical to that of Model 6 in Table 1, except that the individual European and non-European models omit the *Europe* variable. The original model from Table 1 (with the *Europe* control) is shown again in the “All Cases” column on the far right.

The results across model specifications are very similar. Most important for my theory-testing, the coefficients on *Autonomy* are negative and statistically significant in all three models. The results so far give strong support to H1a, that higher autonomy (equivalently, low dependence on local populations’ voluntary support) is associated with a decreased probability of pre-attack warnings. The coefficients on *Maximalist* are also consistently negative, though not statistically significant, across models. This gives some limited support to H1c.

The sign on *PTS* is positive in the European model. This can be explained by the presence of ETA, a very reliable giver of warnings, and the country’s anomalously high *PTS* score (by Eu-

²⁶In the appendix, I do produce a marginal effects graph for this combination of values: *Autonomy*=0, *Religion/Islam*=0, *Suicide*=0, *PTS*=2.

Table 4: Logit Results

Probability of Warning	Europe	Non-Europe	All Cases
<i>PTS</i>	0.7091 (0.51)	-0.1787 (0.19)	0.1477 (0.29)
<i>Autonomy</i>	-3.562*** (1.3)	-0.6505*** (0.20)	-0.9176*** (0.28)
<i>Maximalist</i>	-0.1545 (0.43)	-0.7553 (0.54)	-0.7676* (0.45)
<i>Religion/Islam</i>	† †	0.2468 (0.46)	-0.0640 (0.50)
<i>Suicide</i>	† †	0.2468 (0.46)	-0.0640 (0.50)
<i>PrivateCitizens</i>	0.6968 (0.48)	-1.469*** (0.54)	0.0323 (0.43)
<i>Business</i>	0.6632 (0.41)	-0.4635 (0.49)	0.2617 (0.37)
<i>CivilSociety</i>	1.280*** (0.42)	0.3808 (0.35)	1.176*** (0.42)
<i>Infrastructure</i>	1.904*** (0.54)	0.1999 (0.40)	1.168*** (0.40)
<i>Tourists</i>	2.486*** (0.48)	† †	1.761*** (0.56)
<i>Europe</i>			2.406*** (0.78)
Constant	-1.837** (0.88)	-1.829*** (0.54)	-3.264*** (1.0)
<i>N</i>	561	2579	3152
Log Likelihood	-346.593	-263.660	-628.037
Wald χ^2	†	70.97	613.47
Pseudo R^2	0.0796	0.0867	0.3403

*p<0.1; **p<0.05; ***p<0.01; †not calculated by Stata; Standard errors clustered on perpetrator group

ropean standards). I have no *a priori* theoretical reason to expect a causal relationship between Spain's peculiar fascist legacy and ETA's high frequency of warning. As such, I am inclined to view this as an outlier case, and the positive correlation between *PTS* and warnings as a spurious relationship. The coefficient on *PTS* is *negative* in non-European cases, in keeping with my theory and H1b. The model estimated on all cases splits the difference, however, giving *PTS* a positive, small, and statistically insignificant coefficient.

The logit estimator could not calculate coefficients for *Religion/Islam* and *Suicide* in the European model. This is because Hizballah's handful of European attacks had no warnings, and the estimator cannot calculate coefficients on variables that do not vary. The non-European model lacks a coefficient for *Tourists* because there were no warnings prior to the 7 attacks on tourism targets outside of Europe. However, the models are still broadly comparable. With the exception of *PTS*, the results for the theoretically significant variables are stable. The sign changes among the target type dummies are interesting to note, however. *Government* predicts a moderate probability of warnings in the non-European model, compared to a very low probability in the full model and European model.

Due to the lack of variation in *PTS* and *Autonomy* scores, it is not possible to provide controlled comparisons of predicted probabilities among European bombings.²⁷ It is, however, possible to give meaningful comparisons using the non-European cases. Because I am calculating marginal effects for the non-European cases only, I use the logit model separately estimated on those cases. Other than the change to the coefficient on *PTS*, the results are not substantially different from the results of the full model, except for a slight attenuation of *Autonomy* and *Islam's* positive effects on the probability of warning. I include marginal effects tables based on both the non-European model and the "All Cases" model in the appendix, demonstrating that the marginal effects are not markedly different.

²⁷One could compare predictions for low and medium autonomy non-religious, non-suicide, non-maximalist attackers like ASALA, but the *PTS* value for all ASALA attacks is 3, a value not observed in any other European attacks.

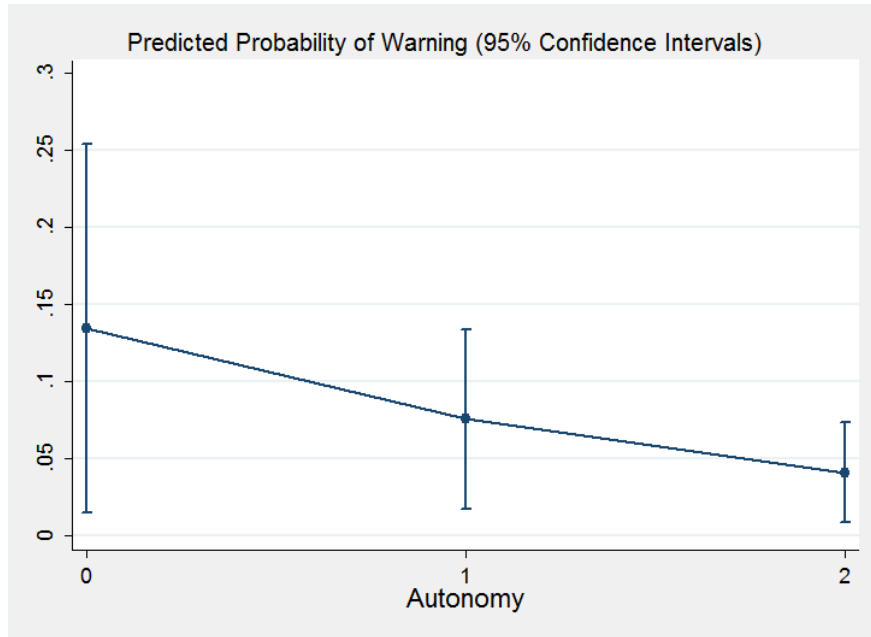


Figure 1: Probability of Warning: Non-Maximalist, Non-Religious, Non-Suicide Attacker

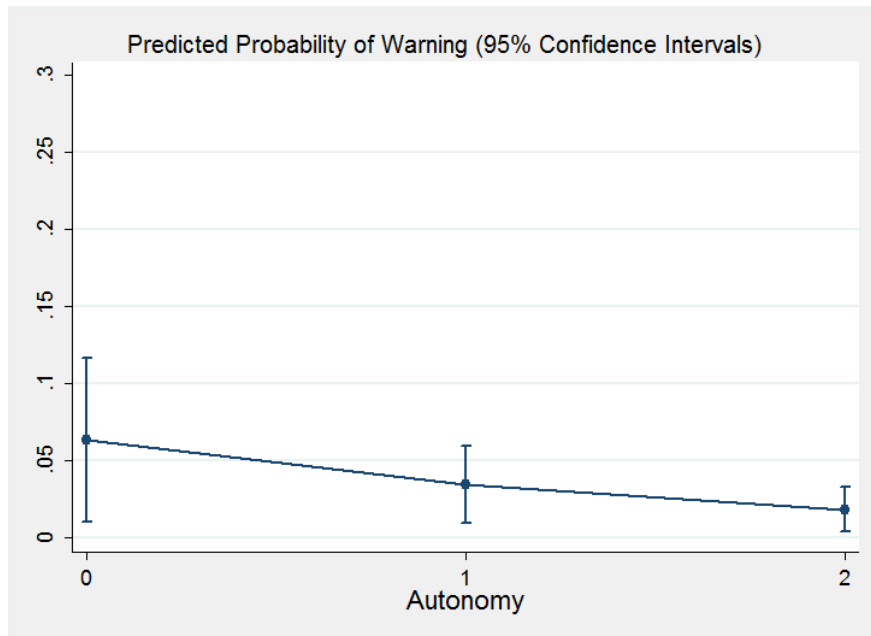


Figure 2: Probability of Warning: Maximalist, Religious, Non-Suicide Attacker

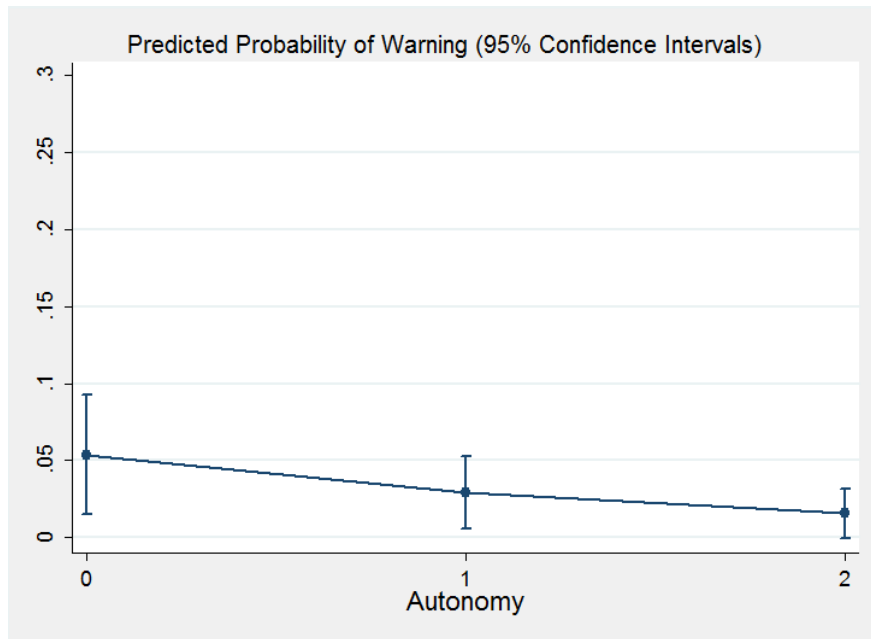


Figure 3: Probability of Warning: Non-Maximalist, Religious, Suicide Attacker

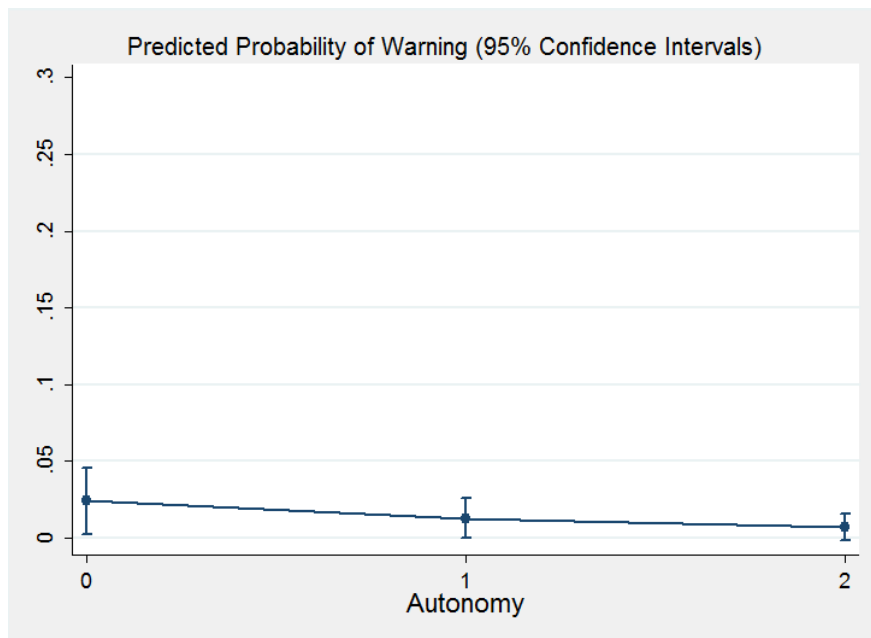


Figure 4: Probability of Warning: Maximalist, Religious, Suicide Attacker

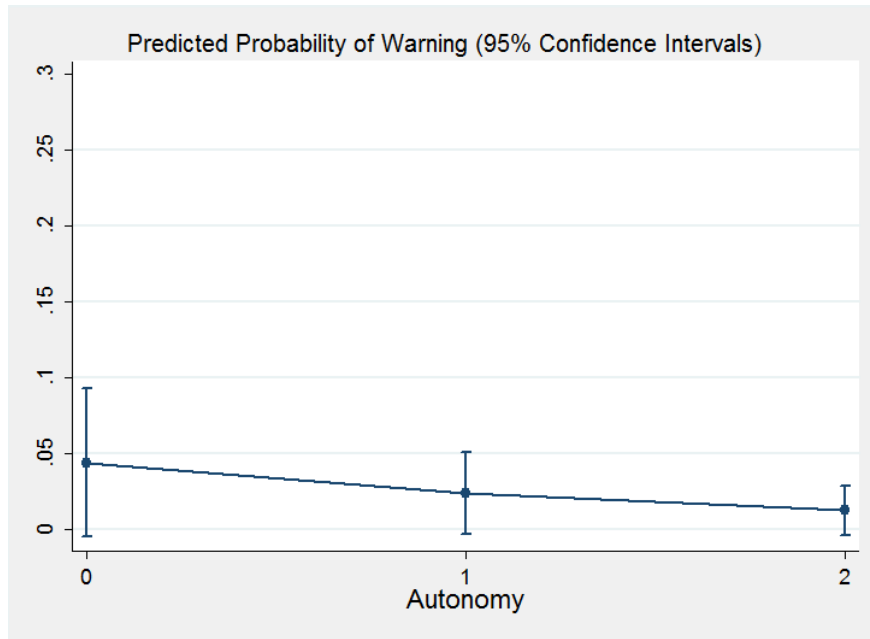


Figure 5: Probability of Warning: Maximalist, Non-Religious, Non-Suicide Attacker

Figures 1-5 show the logit model's predictions based on different levels of *Autonomy*. Each graph assumes particular values of *Maximalist*, *Religion/Islam*, and *Suicide* and *PTS* fixed at 4 (a common value in non-European cases). Each graph also assumes a government target, facilitating controlled comparisons across graphs. Each point represents a predicted probability of warning. The prediction is surrounded by a 95% confidence interval, depicted with an upper and lower bar. It is important to note that this is the confidence interval for the point prediction, not for the overall effect of the variable. The statistical significance of each variable's effect is shown in the original regression tables.

Figure 1 gives predicted probabilities for non-maximalist religious groups (Hizballah, for example) carrying out conventional non-suicide attacks. Figure 2 gives predictions for maximalist religious groups (the various Al Qa'ida branches, for instance) carrying out non-suicide attacks. Figure 3 gives predictions for non-maximalist religious groups carrying out suicide attacks. Figure 4 gives probabilities for maximalist religious groups carrying out suicide attacks. Finally, Figure 5 shows predictions for non-religious maximalist groups (Marxist guerrillas, for instance) carrying

out non-suicide attacks. (Because of a lack of comparable real life cases, I do not generate a graph for non-religious non-Maximalists, or non-religious groups carrying out suicide attacks, at $PTS=3$ and all three *Autonomy* levels.)

Comparing the graphs, we see the highest predicted probability of warnings in Figure 1 (non-maximalist, religious, non-suicide attacks). At a low autonomy level, when the group is completely dependent on local populations' voluntary support, there is a 14 percent probability of the group giving pre-attack warnings. The probability of pre-attack warnings by the same group decreases to roughly 4 percent if the group acquires both a state sponsor and a territorial base (giving it high autonomy). In all of the graphs, the predicted probability of warning is considerably higher for militant groups that are heavily dependent on local popular support for their survival. *Autonomy's* effect is substantively significant, lending further support to my theory and H1a.

The next highest probabilities of warning are seen in Figure 2 (maximalist, religious, non-suicide attacks). Low autonomy groups in this category have a roughly 7 percent probability of warning, but this decreases to roughly 2 percent if a group has a territorial base and state support. Looking at Figure 3 and Figure 4, we see relatively lower predicted probabilities for suicide attacks by non-maximalist religious groups and maximalist religious groups, respectively. This is what conventional and academic wisdom would lead us to expect. Suicide attack is an excellent tactic for achieving surprise, and militants seem disinclined to spoil it by giving warnings. It is interesting, however, that even in cases of suicide attack, there is some probability of observing warnings. An August 4, 2002 suicide attack by Hamas (a non-maximalist religious group) provides one example. Having boarded an Israeli bus, the bomber realized that not all of the passengers were Jews. According to news reports, "the bomber apparently warned two Arab students of the impending attack, and they got off the bus shortly before it blew up" (Steele 2002).

These graphs also highlight an important prediction of the logit model: secular militant groups are less prone to give warnings, compared to religious groups. Looking at Figure 5, a maximalist non-

religious group carrying out a non-suicide attack has at most a 5 percent probability of warning, assuming it depends entirely on local populations' support (*Autonomy*=0). That is lower than the probability of a militant Islamic group warning before a non-suicide attack – and lower than the chance of a suicide bomber warning, assuming the militant group is non-maximalist, religious, and fully dependent on local support. Conventional wisdom would associate religion, particularly Islam, and suicide bombing with very low probabilities of warning. The model, however, also considers the many non-warning attacks by secular maximalist groups (*Sendero Luminoso* for instance). Taking all of those attacks into account, the model predicts that secular groups will actually be less likely to give warnings.

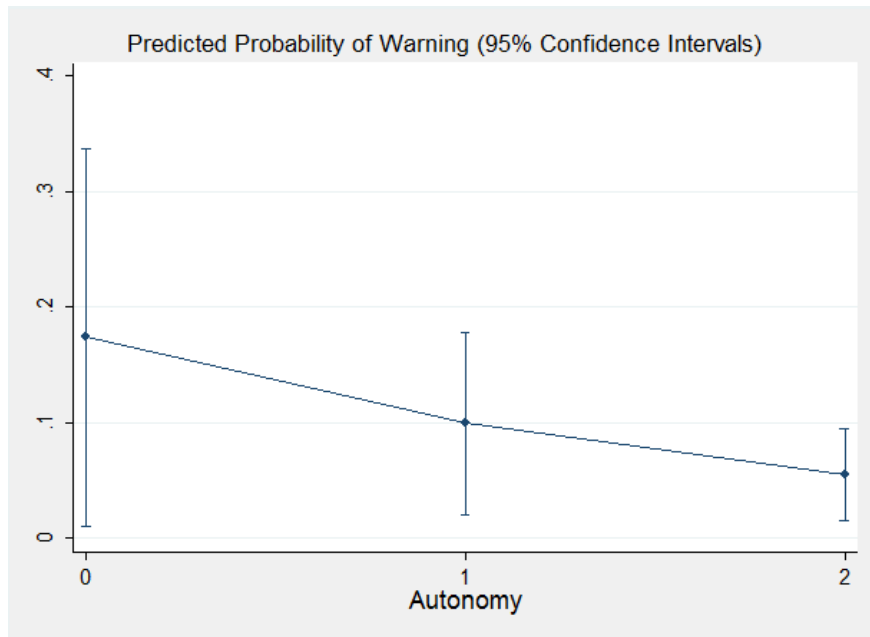


Figure 6: Probability of Warning: Civil Society Target

Figures 6-10 provide a comparison of the model's predictions when the details of the attacker and attack are held constant, but the type of target is allowed to vary. To visualize effect of target selection, each of these figures assumes a non-maximalist religious group carrying out a non-suicide attack on a state with a *PTS* score of 4. The Moro Islamic Liberation front would be one example

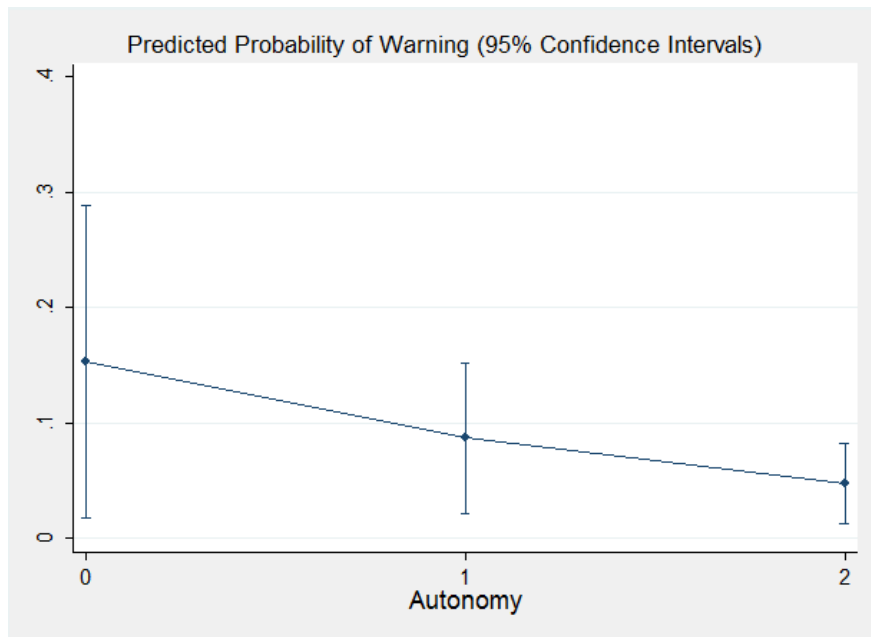


Figure 7: Probability of Warning: Infrastructure Target

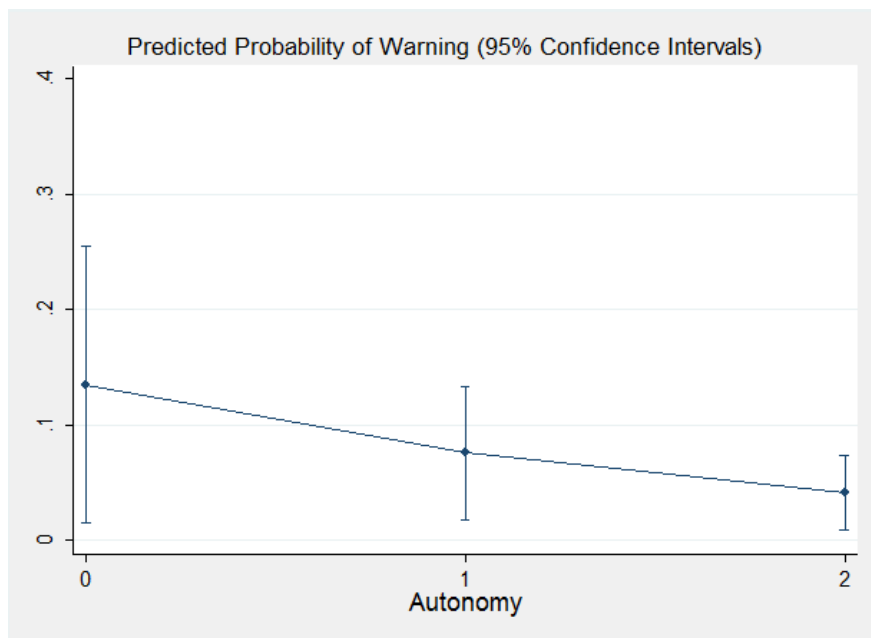


Figure 8: Probability of Warning: Government Target

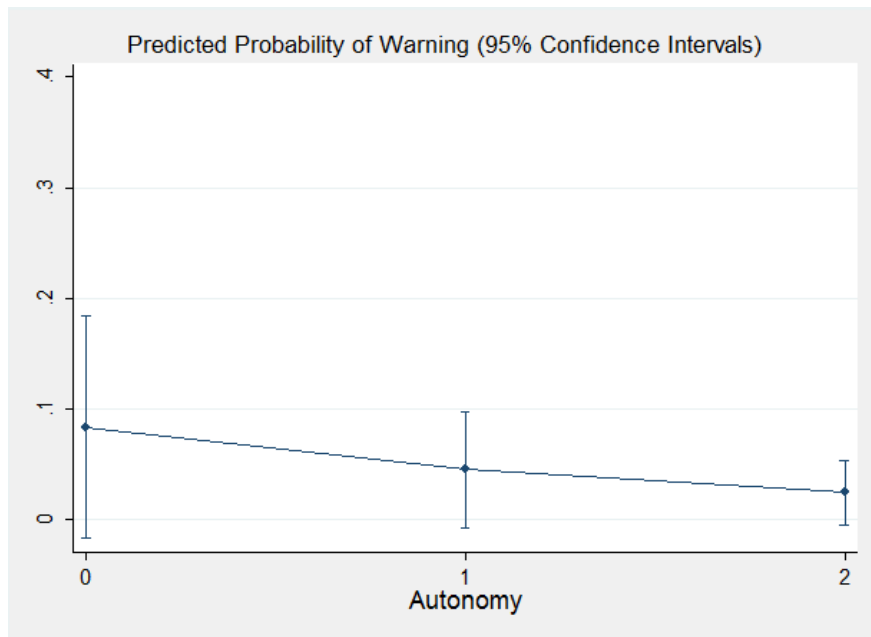


Figure 9: Probability of Warning: Business Target

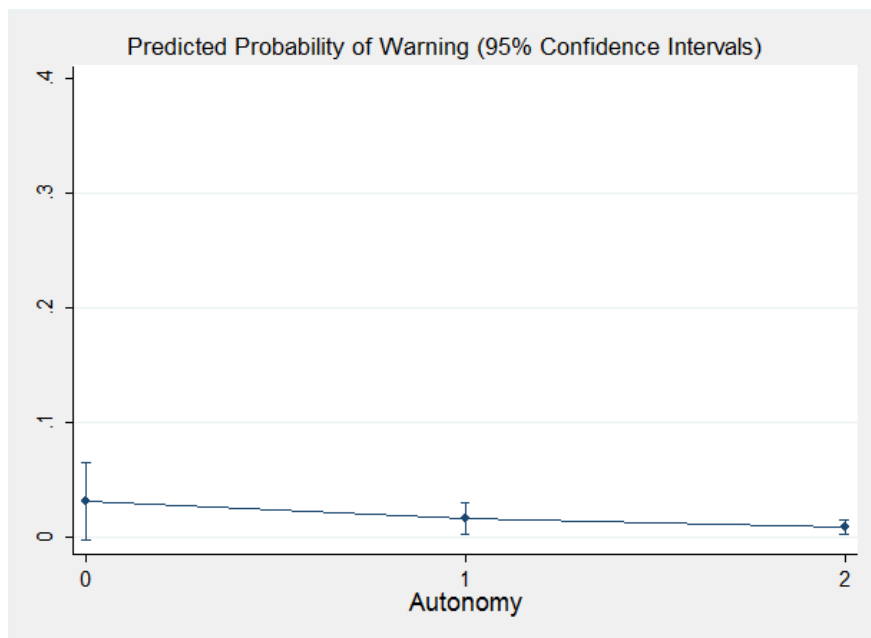


Figure 10: Probability of Warning: Private Citizens Target

of such a group, although the Philippines' *PTS* score sometimes rises to 3. Figures 6-10 show predicted probabilities for attacks on civil society, infrastructure, government, business, and private citizen targets respectively. The probabilities of warning are highest for attacks on civil society targets, approaching 18 percent for low autonomy groups (Boko Haram, for example, although the group has increased its territorial control since 2012). The probability of warning is slightly less for infrastructure and government targets, still less for business targets, and quite low for private citizen targets. We can make sense of this by considering what the extremes represent: attacks on schools, religious institutions, journalists, and NGOs, versus attacks on all other private individuals. Recall from the Peruvian case studies how the MRTA attacked US Binational Centers, but gave warnings for people in those facilities to leave before the bombs went off. Although the generic term "private citizens" carries a connotation of innocence, militant groups often target specific private individuals with bombs. In these cases, a no-warning bombing is not indiscriminate, in the same way as a no-warning bombing of a school or church would be. It is not too surprising to find that private citizens receive warnings at the lowest rate of all the target categories.

The relatively high rate of warnings for infrastructure attacks makes sense because infrastructure cannot easily be moved out of the way of a bomb. The low rate of warnings for businesses makes sense considering that many of the non-European groups in my sample are Marxists who view capitalism (and American-owned businesses) as their imperialist enemies. The moderate rate of warnings for government targets is surprising, however. The IRA and ETA viewed courts, judges, and other agents of the state as legitimate military targets, and often attacked them without warning. In the European and "All Cases" models, government targets did receive the lowest frequency of warnings. The most likely explanation for the difference across regions is that non-European conflicts frequently take place around political transitions. Europe's governing institutions are relatively well established. Even after the fall of the Iron Curtain, Europe experienced a low degree of violence around elections themselves. The most prolific groups in Europe, the IRA and ETA, may view the electoral boundaries and processes as illegitimate, but they do not bomb polling stations. Outside of Europe, things are different. *Sendero Luminoso's* first violent act was the theft

and burning of ballot boxes to protest Peru's transition to a democratic political system. The Taliban has also bombed polling stations to protest the introduction of democracy. In many cases, the group has given warnings about these attacks.²⁸ We observe a higher frequency of warnings for government targets outside of Europe, possibly because non-European militants are attacking nascent institutions to deter people from participating – not simply to catch and punish people once they have participated. The warning itself may be valuable in making the deterrent threat as explicit as possible.

The next three figures show comparisons that are not so closely controlled. Instead, these depict contrasts between different types of groups carrying out attacks commonly associated their types. Figure 11 shows a contrast between a maximalist non-religious militant group carrying out non-suicide attacks on civil society targets and a maximalist religious group carrying out suicide attacks on government targets. Substantively, this is like comparing a Latin American Marxist group, using tactics typical for that variety of militant, to a branch of Al Qaeda carrying out suicide attacks. Both stylized types show a low probability of warning, even in cases where the group depends entirely on local people for support. (Al Qaeda in Iraq and Al Qaeda in the Arabian Peninsula fit that description when the BAAD database was compiled.) As discussed above, secular groups like the Latin American Marxists have lower probabilities of warning in general, but the assumption of a civil society target, paired with the assumption of suicide tactics by the Al Qaeda-type group, give some separation between the model's point predictions for the two groups. The 95% confidence intervals overlap, however, meaning that we cannot be 95% certain that the actual probabilities of warnings by the two groups are different.

²⁸For example, the Global Terrorism Database lists a rash of incidents on September 18, 2010, which were preceded by general warnings about attacks on polling places. See incident numbers 201009180007 through 201009180013 and 201009180015 through 201009180028.

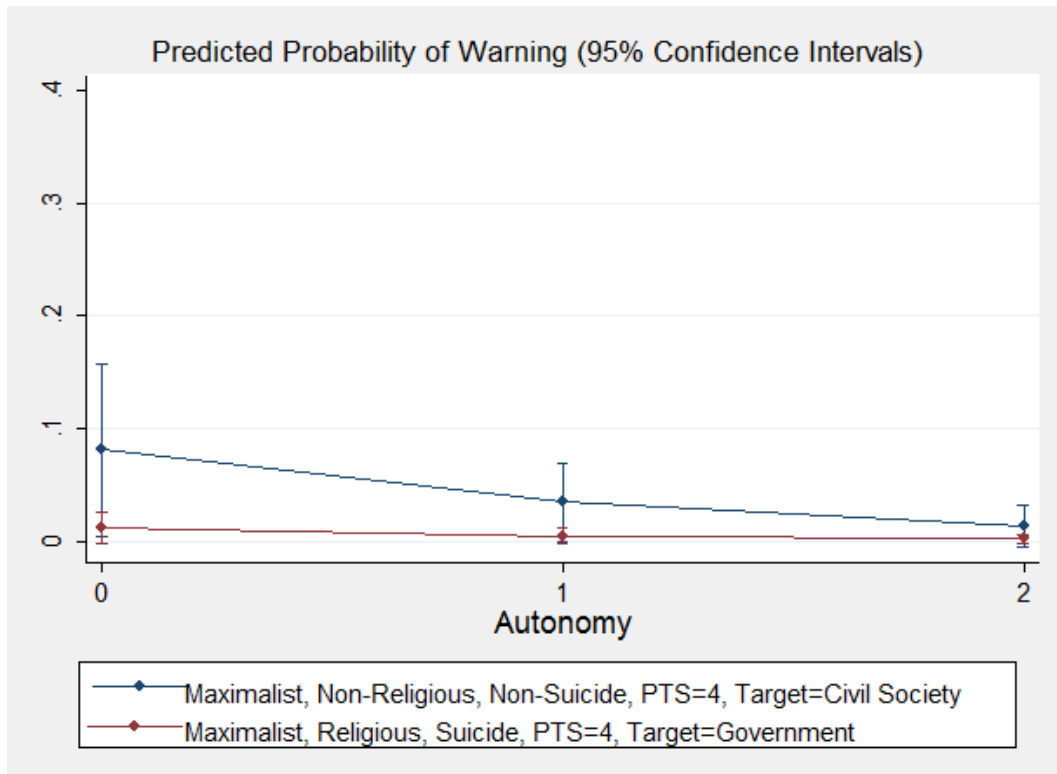


Figure 11: Probability of Warning: Maximalist, Religious, Non-Suicide Attacker and Maximalist, Religious, Suicide Attacker

Figures 12 and 13 show contrasts between a maximalist religious group carrying out suicide attacks on private citizens and a non-maximalist religious group carrying out non-suicide attacks on civil society targets. One may envision this contrast as a comparison between an Al Qa'ida or Taliban-like group and a group like the Moro Islamic Liberation Front (MILF), Hizballah, or Hamas. In both figures, the maximalist group is assumed to be fighting a highly abusive government with a *PTS* score of 5. In Figure 12, the non-maximalst group is assumed to be fighting a slightly less abusive government, with a *PTS* score of 4. In Figure 13, it is assumed to be fighting a government with a *PTS* score of 3.

In both figures, the maximalist religious group's use of suicide tactics creates a very low probability of warning, practically zero. There is separation not only from the non-maximalist groups' predicted probabilities of warning but also between the confidence intervals of the point predic-

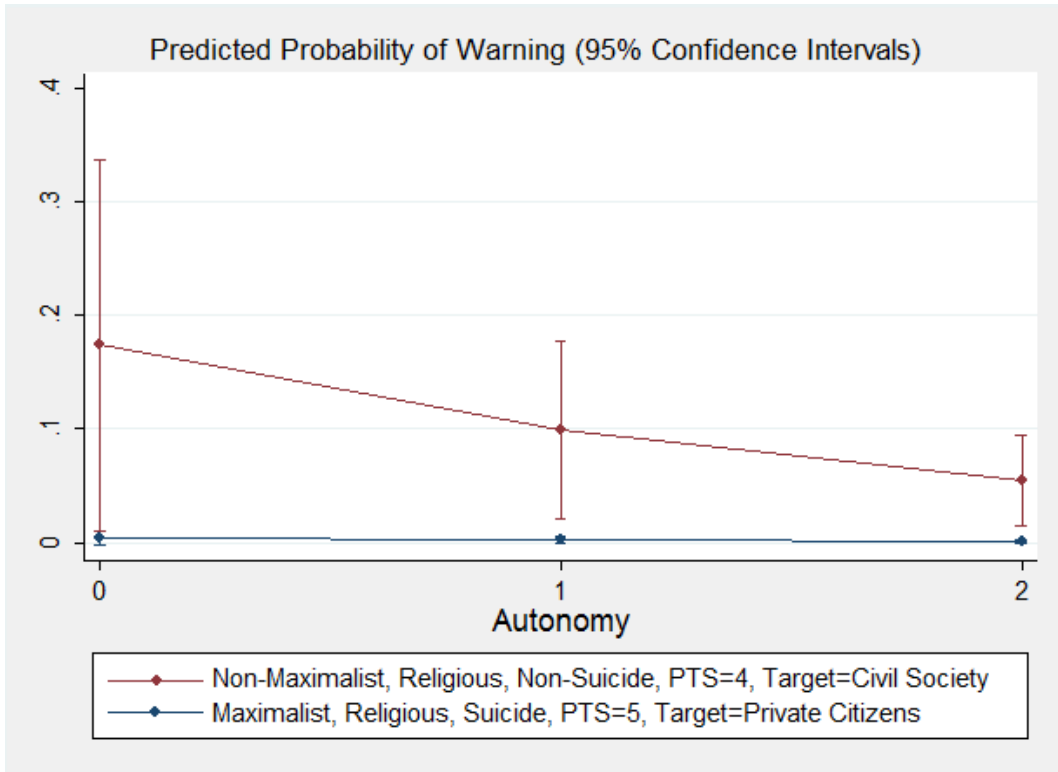


Figure 12: Probability of Warning: Non-Maximalist, Religious, Non-Suicide Attacker (PTS=4) and Maximalist, Religious, Suicide Attacker

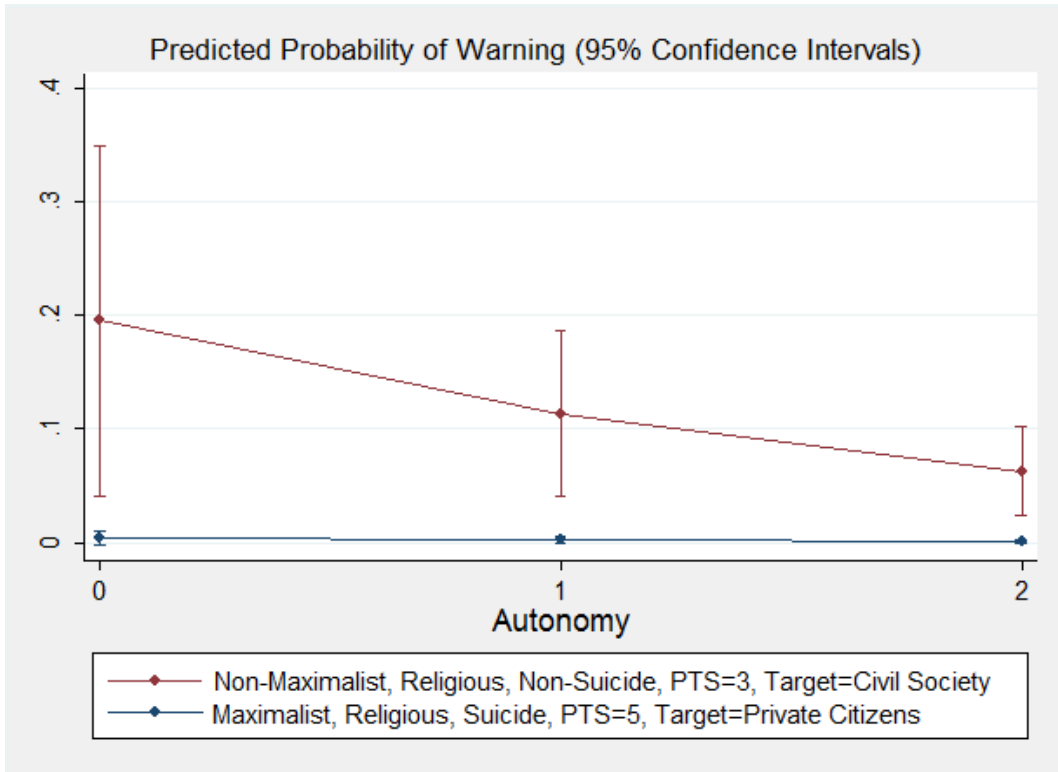


Figure 13: Probability of Warning: Non-Maximalist, Religious, Non-Suicide Attacker (PTS=3) and Maximalist, Religious, Suicide Attacker

tions (although in Figure 12 one pair of confidence intervals overlaps). Again, it is important to remember that the overlap of confidence intervals means only that a pair of point predictions may not be separate in reality (a 5% chance of a Type I error). Overlapping confidence intervals does not mean that a particular variable has a significantly insignificant effect.

Given the different assumptions about the government's *PTS* score, the separation between the non-maximalist militant's and maximalist militant's predicted probabilities is greater in Figure 13 than in Figure 12. Although its coefficient is small in the estimated logit model, *PTS* does play a role in shaping the model's point estimates.

5.5 Discussion

The results of my quantitative analysis have confirmed the most important hypothesis derived from my theory of warnings, as refined through the discussion of my qualitative case studies. That hypothesis is:

H1a: *Militants who depend heavily on local support are more likely to give pre-attack warnings.*

Militant groups who depend on voluntary support from local populations – as opposed to state support or the shelter and support they can extract from territory under their control – are beholden to the views of their local hosts. If local populations expect militants to uphold a high standard of humanitarian behavior, militants are obliged to do so, or they may find themselves turned out on the street (or unable to recruit or raise funds). This finding comports with arguments from the literature on guerrilla warfare, arguing that moral legitimacy is a prerequisite for ultimate success in overthrowing and replacing the government (Lomperis 1996; Mampilly 2011; Mao 1989).

An important question, then, is how local populations develop their expectations for the militant group. What makes the population desire restraint, versus indiscriminate targeting and

bloodshed? My case studies suggested that local populations adopt different views based on the government's behavior. If the government abuses civilians, local populations will be willing to tolerate some abuses by a militant group that offers a chance to overthrow the government. This logic led to a second hypothesis:

H1b: *Militants fighting a non-abusive government are more likely to give pre-attack warnings.*

The logit models with few controls appeared to support this prediction. Higher *PTS*, representing higher levels of government abuse, was associated with higher frequencies of pre-attack warnings. This result disappeared when I introduced *Europe* as a control variable in the model. The result reappeared (although it was not statistically significant) when I estimated the logit model on a subset of data containing only attacks outside of Europe. The apparent effect of Europe in the full model is a result of Spain's post-fascist political legacy, which has created a persistently high level of government abuses (high *PTS*) even after the transition to democracy. This coincided with the emergence of two militant groups, ETA and GRAPO, both of which give pre-attack warnings a high percentage of the time. Subsetting the data to look only at non-European cases (a decision made to allow better comparisons of marginal effects) showed that *PTS* does have the hypothesized effect, but only once we drop Spain from the analysis. These results give qualified support to H1b. If the government sets a negative example by abusing civilians, local populations may not hold militants to a very high standard. No-warning attacks that harm civilians may pale in comparison with the abuses of the state. But if the state sets a relatively good example of humanitarian behavior, local populations will expect the militant group to do the same. Its support will depend on how well it conducts itself in its dealings with civilians. No-warning attacks will carry high political costs for dependent (non-autonomous) militants fighting relatively well-behaved governments. Militants fighting those governments are more likely to give pre-attack warnings.

My results also give qualified support H1c, which states that militants with maximalist goals are less likely to give pre-attack warnings. The coefficients for *Maximalist* are consistently positive

across model specifications, allowing for subsetting as well. They are also statistically significant at the 0.1 α -level, and the effects are apparent in graphical representation of the model's marginal effects and predicted probabilities. The logic of this hypothesis is that groups with maximalist goals plan to replace existing institutions. A group with this type of plan sees little benefit in appealing to elements of the old system. In fact, it may see little value in restraining its behavior toward anyone outside its base of support. That base will also be willing to tolerate abuses of those on the outside, so the militant group's cost for indiscriminate no-warning attacks (on the out group) will be relatively low.

I also tested a fourth hypothesis regarding the likely effects of religion on warning behavior:

H1d: *Religiously motivated militants are less likely to give pre-attack warnings.*

In analyses of the full dataset, the coefficient on *Religion/Islam* is negative, though not statistically significant. When the model is estimated on the subset of non-European attacks, the sign of the coefficient reverses. Religion's apparent *positive* effect on warning is the result of secular groups (including *Sendero Luminoso* and the LTTE) engaging in hundreds of no-warning attacks. The Islamic religious organizations in the non-European subset give warnings some of the time. Recall the report on the Boko Haram attack, in which the group blew a hole in a prison wall and fought a gun battle to free its members from captivity. Residents of the surrounding area reported that "Boko Haram sent message that they will raid the prison and free their members," and that residents should "steer clear of the area" (Tukur 2013). In Europe, however, the only religious group to carry out attacks (Hizballah) gave no warnings. Non-religious groups like ETA and the IRA gave warnings for a high percentage of their attacks. Overall, this analysis cannot confirm H1d, but does not conclusively disprove it either. What one can say is that religious organizations are more sensitive to their local political circumstances than stylized Western accounts would suggest. These groups know to respect the constituents, at least some of the time. (Recall also the story about the Hamas suicide bomber warning Arab boys to leave the doomed bus.) At the same time

secular groups like *Sendero* are clearly capable of abuse on a massive scale. The relationship between warnings and religion is far from clear.

A clearer finding, related to religion, is that suicide attacks predict a lower probability of warnings by the perpetrator group. The logic is clear enough. If the goal of suicide attacks is to achieve surprise or demonstrate resolve (Hoffman and McCormick 2004), the bomber should not give the game away by warning. Religion is one motivation for suicide attack (Bloom 2004). The variables *Religion/Islam* and *Suicide* have a Pearson correlation coefficient of 0.3321. *Suicide's* pairwise correlation with *Warning* is only -0.0909, compared to *Religion/Islam's* correlation of -0.1978 with the warnings variable. Yet when *Suicide* is introduced into the regression equation, it takes on a substantially larger effect than *Religion/Islam*, and pushes *Religion/Islam's* coefficient above zero. The relationship among these variables is not simple, but given religion's role in pushing people toward suicide by "martyrdom," it may be exerting an effect that does not show up in the regression coefficients themselves.

6 Warnings, Phone Chains, and Trust

In this section, I discuss the interactive aspect of warnings – how militant groups communicate them to governments and how governments respond. In cases where the militant group cannot directly warn people at the scene of an attack, they must warn the government and hope that emergency and security personnel will be dispatched to clear the area around the bomb. If the government does not do this, the warning may be wasted and the bomb will harm people the militant group did not intend to harm. Of course, militants can also issue hoax warnings to force unnecessary evacuations or draw security personnel into traps. The government, realizing these dangers, must decide whether to believe the person giving the warning. Is she an actual representative of a militant group, and if so, is that militant group giving a truthful warning or a misleading one? Even if the warning is likely to be true, is it worth undertaking a costly and dangerous response, given the amount of damage the government can expect to prevent?

To understand the logic of this situation, I present a formal model of militant/government interaction. I use a signaling framework, as developed by authors such as Spence (1973) and Cho and Kreps (1987). To the basic structure of the signaling game (an informed player signaling her “type” and an uninformed player choosing a strategy based on inferences about the signaler’s type) I introduce “noise.” Noise is a concept derived from information theory, advanced by authors such as Shannon (1948). In game theory, noise represents additional uncertainty about whether the signaler’s message will reach the receiving player unchanged, or whether flaws in the signaling “technology” will change the message before it reaches the receiver. In my game, noise represents the probability that a prank caller gives the government a false warning, which cannot be distinguished from the warning of a militant. (Militants may also give false warnings of their own.) Information theorists and game theorists have noted unexpected results when noise is introduced to signals. Shannon proves mathematically that noisy signals can contain *more* information than clean signals. Game theorists Haan and Sloof (2011) note that higher levels of noise may induce separating equilibria where none existed before. In a strategic context, the introduction of noise may make it *easier* for actors to signal their type to the receiving player. This result is not upheld in

experimental settings, but I find support for it in my analysis of communication between militants and governments. My formal model and empirical analysis make an important contribution to the literature on political conflict, as well as the literature on signaling in general.

6.1 Formal Model

I base my formal model on a few intuitions drawn from the IRA's Bishopsgate and Manchester bombings, as described in the introductory section. Those intuitions are:

First, warnings tend to reduce the human toll of attacks. They allow the government to move people out of the way, mitigating the attack's effects on people despite the attack's destructive physical impact on property. Despite their tremendous power, the bombs at Bishopsgate and Manchester killed only one person, a news reporter who ignored police instructions to evacuate. Casualty reduction is the most notable effect of these bomb warnings. I structure my formal model based on the assumption that some militants reduce casualties intentionally for political reasons.

Second, mobilizing in response to warnings is costly. In the Manchester bombing, for instance, police evacuated a large section of the city's commercial center in response to the IRA's warnings. Such interventions can cost millions of pounds (or dollars) in lost productivity. I structure my model based on the assumption that mobilizing in response to warnings is costly for the government.

Third, militants may give warnings even when they are not attacking. There is nothing to stop a group like the IRA from warning about an attack when it has not actually set one in motion. As most people who attended large secondary schools or universities can attest, pranksters can also give false warnings. False warnings from any source create problems for the government and its first responders. Police rarely observe the person sending the warning. They must decide how to respond without knowing the identity of the sender or whether the threat is real. I structure my model based on the assumption that governments form probabilistic beliefs upon receiving

warnings. They decide how to respond based on their probabilistic beliefs.

Fourth, prank warnings may interfere with militants' attempts to give true warnings. False warnings are a type of noise. A high level of noise may reduce the informative value of the signal, raising the government's expectation that any warning it receives will be a prank. Even if a militant group does not give false warnings, a higher rate of prank warnings from actors outside the group may make militants' truthful warnings seem less credible. However, under particular circumstances I explain below, noise can make true warnings sound *more* credible.

6.1.1 Specification

I model the logic of pre-attack warnings as a signaling game played by the *Government*, a *Militant*, and *Nature*. The sequence of moves is as follows:

1. *Nature* selects the type of the *Militant*. With probability α the *Militant* is "attacking" (Type A). With probability $1 - \alpha$ the *Militant* is "not attacking" (Type $\neg A$).
2. The *Militant* sends a signal " S " to the *Government*. The *Militant* may send a warning of an attack ($S = W$) or a signal of no warning ($S = \neg W$). The *Militant* may send either signal, regardless of whether she is of the attacking or not attacking type.
3. *Nature* determines whether the *Militant's* signal reaches the *Government* as intended, or whether prank callers will convert no-warning signals to warning signals. Mathematically, if the *Militant* has sent a signal of no warning ($S = \neg W$), *Nature* changes the signal to a warning ($S = W$) with probability ω . With probability $1 - \omega$ *Nature* allows a no warning signal to reach the *Government* unchanged. In cases where the *Militant* has intentionally sent a warning signal ($S = W$), *Nature* always allows the signal to reach the *Government* without interference.
4. The *Government* observes the signal S sent by the *Militant*, and chooses to respond by mobilizing police ($R = M$) or by not mobilizing police ($R = \neg M$).

Note that in my specification, it is *Nature* that decides whether an attack is to take place at any particular moment. This assumption, though unrealistic, is useful because it abstracts away other issues that I am not trying to model or explain: why political organizations choose violence as a tactic, why they choose particular targets, why they choose a particular moment to strike, etc. My specification accounts for the basic fact that at any given moment, a militant group (or cell thereof) may be in the process of carrying out an attack. Regardless of whether the group is actually attacking, it has the option of giving a warning *as if an attack were about to take place*. By letting *Nature* determine whether an attack is underway, I am able to model militants' calculations about warning, as well as the *Government's* mobilization decision under conditions of uncertainty, without needing an elaborate model of militant behavior at earlier stages.

The *Government* and *Militant* receive utilities that are closely related. Some of these are zero-sum. For instance, the *Militant* derives utility by inflicting damage (i.e. negative utility) on the *Government*. If a *Militant* is attacking and the *Government* does not mobilize police, the *Militant* receives utility D_1 and the *Government* receives $-D_1$. If the *Militant* is attacking and the *Government* mobilizes police, the *Militant* receives utility D_2 and the *Government* receives $-D_2$. By assumption, $D_1 > D_2 > 0$, meaning that the *Government* can reduce the expected damage from a bombing by mobilizing to clear the targeted area and attempting to defuse the bomb. The D_1 and D_2 parameters incorporate the probability of a bomb destroying its target, without requiring any explicit modeling of that probabilistic outcome. The *Government* and *Militant* also derive utility based on whether the *Government* mobilizes, regardless of whether the *Militant* has attacked. Any time the *Government* mobilizes, it receives utility $-G$ and the *Militant* receives G . This captures the reality that mobilizations are costly to governments and therefore useful to militant groups that wish to inflict economic damage on the government. This specification also captures the reality that mobilizations are costly whether or not a bomb attack is underway. A *Militant* who is not actually attacking can still inflict damage on the *Government* by giving a false warning and inducing a *Government* mobilization in response to the false alarm.

The model includes three additional parameters, X , Y , and Z , representing political costs that *Militants* and *Governments* incur if they engage in behavior that key audiences find unethical or otherwise offensive. For example, an attacking *Militant* who does not give a warning and as a result fails to induce a *Government* mobilization suffers a penalty of $-X$. This penalty represents the political cost of engaging in indiscriminate violence, when the *Militant's* support base would prefer the group to give warnings and allow the *Government* to evacuate civilians. A *Militant* also suffers a penalty, $-Y$, if it is not attacking but it gives a warning and induces a mobilization by the *Government*. This specification captures the possibility that governments may publicly shame the militant group for disrupting daily life (including the lives of the group's local supporters), or that militant organizations who lie about bombings may have future difficulties convincing the government or the public that they mean what they say. False warnings benefit militants in the short term, but they may hinder militants' attempts to issue credible statements, threats, or diplomatic proposals later. Finally, the *Government* suffers a political penalty of $-Z$ if the *Militant* is attacking, the *Government* receives a warning, and the *Government* does not respond. This specification captures the reality that, beyond the expected physical damage and loss of life, a government may suffer political costs when citizens learn that the government failed to protect them despite receiving truthful warnings of an attack.

6.1.2 Equilibrium

This is a sequential game of incomplete information. The *Government* and *Militant* have common knowledge over all probability and payoff parameters. However, only the *Militant* observes *Nature's* selection of the *Militant's* type, $B \in \{A, \neg A\}$ (i.e. whether the *Militant* is attacking). The *Government* cannot directly observe the *Militant's* type and must infer that information based on the prior probabilities of attacks (α) and prank warnings (ω), the expected signaling behavior of each type of *Militant* in equilibrium, and the signal received from the *Militant*. The solution concept for the game is the Perfect Bayesian Equilibrium – a strategy profile and belief system such that the strategies are sequentially rational given the belief system and the belief system is consistent, given the strategy profile. (Beliefs at information sets not reached in equilibrium are specified

as necessary, because they cannot be calculated by Bayes' rule.) Given the structure of this game, the Perfect Bayesian Equilibrium comprises the following elements:

1. The *Militant's* optimal selection of a signal (W or $\neg W$), conditional on the *Militant's* type and the expected *Government* response R to the signal.
2. The *Government's* formation of an updated belief (θ) about the *Militant's* type, conditional on the signal received.
3. The *Government's* optimal response (M or $\neg M$), given its probabilistic belief θ and the expected payoffs for mobilizing or not mobilizing.

We can consider each element in turn. At the stage of the *Government's* response, the *Government* faces tradeoffs. For instance, a *Government* that mobilizes in response to a truthful warning will receive $-D_2 - G$ as opposed to $-D_1 - Z$ if it does not mobilize. Assuming that an attack is underway and the attacking *Militant* gives a warning, the *Government's* choice is between an economically costly mobilization and reduced damage from the attack, versus a politically costly non-mobilization and suffering the full expected damage of an attack. However, because the *Government* cannot directly observe whether an attack is underway, there is also a possibility that the warning came from a non-attacking *Militant* or a prank caller (i.e. the move by *Nature* to convert a non-warning signal to a warning signal). If the warning is false, the *Government* will receive $-G$ for mobilizing or a status quo utility of 0 for not mobilizing. The *Government's* inference about the probable type of the *Militant* (attacking or not attacking) is critical to determining the optimal response.

Where θ_W represents the *Government's* belief about the *Militant's* type, conditional on receiving a warning, and $U_G(R|B, S)$ represents the *Government's* utility for a particular response, given the type of the *Militant* and the *Militant's* signal, the *Government's* choice between mobilizing and not mobilizing depends upon the following inequality:

$$\theta_W(U_G(M|A, W)) + (1 - \theta_W)(U_G(M|\neg A, W)) \geq \theta_W(U_G(\neg M|A, W)) + (1 - \theta_W)(U_G(\neg M|\neg A, W))$$

The left side expression represents the expected utility of mobilizing and the right side expression represents the expected utility of not mobilizing. Plugging in the *Government's* payoffs for the generic utility expressions gives $\theta_W(-D_2 - G) + (1 - \theta_W)(-G) \geq \theta_W(-D_1 - Z) + (1 - \theta_W)(0)$ and a condition on the *Government's* belief θ_W of:

$$\theta_W \geq \frac{G}{D_1 - D_2 + Z}$$

The right side of this expression represents the ratio of the *Government's* costs of mobilizing (G) to the *Government's* expected damage savings if it mobilizes in response to a truthful warning, rather than not mobilizing. If θ_W exceeds the value of the ratio, the *Government* mobilizes upon receiving a warning. Similarly, we can express the condition for the *Government* mobilizing or not mobilizing in response to a non-warning signal, as:

$$\theta_{\neg W}(U_G(M|A, \neg W)) + (1 - \theta_{\neg W})(U_G(M|\neg A, \neg W)) \geq \theta_{\neg W}(U_G(\neg M|A, \neg W)) + (1 - \theta_{\neg W})(U_G(\neg M|\neg A, \neg W))$$

or equivalently: $\theta_{\neg W}(-D_2 - G) + (1 - \theta_{\neg W})(-G) \geq \theta_{\neg W}(-D_1) + (1 - \theta_{\neg W})(0)$. This gives a condition on the *Government's* updated belief, $\theta_{\neg W}$:

$$\theta_{\neg W} \geq \frac{G}{D_1 - D_2}$$

The right side represents the ratio of the *Government's* costs of mobilizing to the *Government's* expected damage savings if it mobilizes during a no-warning attack. If $\theta_{\neg W}$ exceeds the value of the ratio, the *Government* mobilizes upon observing a signal of no warning.

At the stage where the *Government* updates its beliefs, the solution is given by Bayes' Rule. For instance, the *Government's* probabilistic belief upon receiving a warning is:

$$\theta_W = Pr(A|W) = \frac{Pr(W|A)Pr(A)}{Pr(W|A)Pr(A) + Pr(W|\neg A)Pr(\neg A)}$$

The value for θ will depend on the *Government's* prior beliefs about the probability of an attack and the probability of a prank call. For example, if in equilibrium, an attacking *Militant* would give a warning but a non-attacking *Militant* would not, the *Government's* belief upon receiving a warning would be: $\theta_W = \frac{(1)(\alpha)}{(1)(\alpha) + (\omega)(1-\alpha)} = \frac{\alpha}{\alpha(1-\omega) + \omega}$, and upon receiving no warning: $\theta_{-W} = \frac{(0)(\alpha)}{(0)(\alpha) + (1-\omega)(1-\alpha)} = 0$. Bayes' Rule may be used to calculate θ for any signal that could be received in equilibrium. The *Government's* beliefs upon receiving off-equilibrium signals will be specified as necessary, fulfilling the requirement that in a Perfect Bayesian Equilibrium, players must have defined beliefs even at off-equilibrium information sets.

At the stage where the *Militant* chooses its optimal signal, the *Militant* faces a choice between a guaranteed payoff for warning of $U_M(W|R)$, where R is the *Government's* expected response, conditional on the *Militant's* signal, and an uncertain payoff based in part on the probability that a prank call is made, changing the *Militant's* non-warning signal to a warning. This event is determined in a random draw by *Nature*, with probability ω that a prank call is made, and probability $1 - \omega$ that no prank call is made and the non-warning signal reaches the *Government* unchanged. The *Militant's* choice of signals then depends on the following inequality:

$$U_M(W|R) \geq (\omega)(U_M(W|R)) + (1 - \omega)(U_M(-W|R))$$

The *Militant's* choice of the optimal signal will depend on the government's expected response to a warning or non-warning. For example, assuming that the *Government* responds to warnings, but not to non-warnings, an attacking *Militant* warns if the left side of the following expression exceeds the right side:

$$D_2 + G \geq (\omega)(D_2 + G) + (1 - \omega)(D_1 - X)$$

A non-attacking *Militant* warns if the right side of the following expression exceeds the left side:

$$G - Y \geq (\omega)(G) + (1 - \omega)(0)$$

Using the above logic, the model can be solved to find the Perfect Bayesian Equilibrium for different combinations of parameter values.

Four strategic scenarios

One useful way of discussing the model's equilibrium and results is to examine the minimum conditions for *Militants* and *Governments* to give warnings and mobilize, respectively. These conditions establish four basic strategic scenarios, based on what the attacking *Militant* and the *Government* would do if incomplete information were not an issue. Given the payoff structure of the *Government*, mobilizations are never rational unless $D_1 - D_2 + Z > G$. If this condition is not met, no probabilistic belief can satisfy the condition for mobilization in response to a warning: $\theta_W > \frac{G}{D_1 - D_2 + Z}$. Note also that the attacking (*A-type*) *Militant* requires $D_2 + G > D_1 - X$ before it will offer pre-attack warnings to a *Government* that would mobilize in response. The *Government* and attacking *Militant* conditions can be rewritten in relation to zero and expressed as part of the same inequality: $D_1 - D_2 - G + Z \geq 0 \geq D_1 - D_2 - G - X$.

The four possible orderings of this expression give four strategic scenarios, based on the *Government* and attacking *Militant's* preferences. An ordering of $D_1 - D_2 - G + Z > 0 > D_1 - D_2 - G - X$ implies that the *Government* would be willing to mobilize in response to true warnings and the attacking *Militant* would prefer to give such warnings and elicit a mobilization. $D_1 - D_2 - G + Z > D_1 - D_2 - G - X > 0$ implies that the *Government* would mobilize in response to true warnings but *Militants* would never give such warnings to mobilize the government. With an ordering of $0 > D_1 - D_2 - G + Z > D_1 - D_2 - G - X$, the *Government* cannot afford to respond to warnings, although attacking *Militants* would prefer to give such warnings and mobilize the *Government*. A fourth ordering would produce a *Government* that could never afford to respond to warnings, and an attacking *Militant* that would never give truthful warnings to mobilize the *Government*.

However, this outcome is nearly impossible to achieve. Combining the *Government's* and attacking *Militant's* conditions gives $D_1 - D_2 - G - X > 0 > D_1 - D_2 - G + Z$, a logical contradiction for any $X, Z > 0$. To avoid contradiction, we must set $Z = X = 0$, loosen the inequalities in the players' conditions, and set $D_1 - D_2 = G$. Additionally, we must specify that the attacking *Militant* warns when indifferent and the *Government* mobilizes when indifferent. In sum, we must make strong assumptions in order to have a *Militant* that would never want to mobilize the *Government* and a *Government* that could never afford to mobilize anyway. In this game, the bloody surprise attacks we associate with terrorism are generally not a jointly optimal outcome for the attacking *Militant* and *Government*. To the contrary, undefended surprise attacks generally represent a missed opportunity: one or more players in the game preferred an equilibrium of warnings and casualty-reducing mobilizations, but this outcome was not realized because of an incompatibility with other players' incentives or because uncertainty over the *Militant's* type prevented the *Government* from mobilizing.

6.1.3 Empirical Implications

In this section I summarize the more interesting results of the model. For brevity, I include only as much mathematical detail as is necessary to demonstrate the logic underlying the results. I provide a full equilibrium analysis and algebraic proofs of the propositions in the appendix.

Result 1: Three Factors Produce Pre-Attack Warnings

Recalling the sequential structure of the game, we can determine whether the attacking *Militant* warns based on the *Militant's* payoffs and the expected behavior of the *Government*. Since the *Militant* knows its own type, the expected equilibrium behavior of a non-attacking *Militant* is not an immediate concern. Looking at the decision of an attacking *Militant*, two inequalities are of interest: $D_2 + G \geq D_1 - X$ and $D_1 \geq D_1 - X$.

The first inequality represents the attacking *Militant's* condition for warning a *Government* that would mobilize in response (giving the left side payoff) or not warning the *Government* so that it

does not mobilize (giving the right side payoff). The second inequality represents the attacking *Militant's* condition for warning (giving the left side payoff) or not warning (giving the right side payoff), assuming a *Government* that does not mobilize regardless of the signal. Rewriting the first inequality as $X \geq D_1 - D_2 - G$, we see that when a *Government* mobilizes only when warned, the attacking *Militant's* choice of signals depends on the political cost for harming civilians, balanced against the amount of expected damage sacrificed by warning and the cost that can be imposed on the *Government* by inducing it to mobilize. Higher values of X and G will encourage the *Militant* to warn, and higher values of $D_1 - D_2$ will discourage warning. Looking at the second inequality (giving the incentives for warning or not warning an unresponsive *Government*), the choice depends only on the value of X . If there is any cost for harming civilians, an attacking *Militant* will give warnings.²⁹ We can summarize these findings in a proposition:

Proposition 1 (attacking *Militants'* incentives for warning)

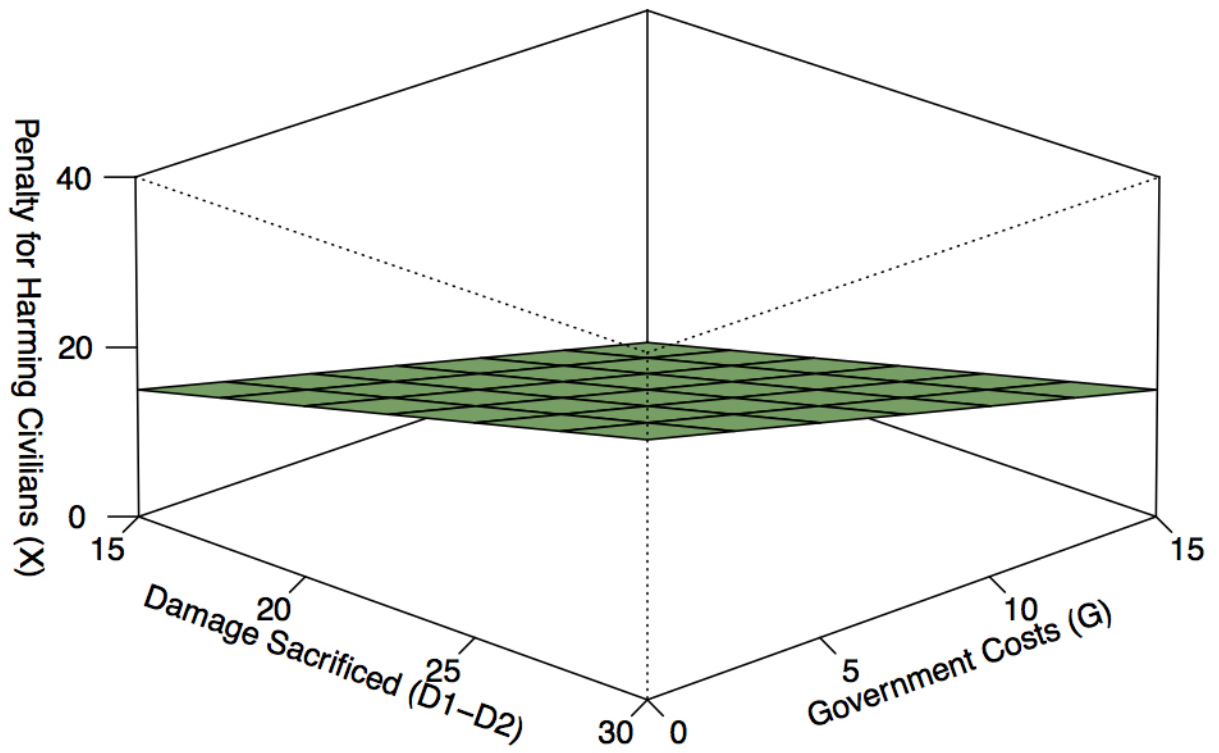
An attacking *Militant's* incentive to warn:

1. *Increases* as the political cost for harming civilians (X) increases
2. *Increases* as the *Government's* cost of mobilizing (G) increases (assuming the *Government* will mobilize when warned)
3. *Decreases* as the expected damage sacrificed ($D_1 - D_2$) increases (assuming the *Government* will mobilize when warned)
4. Depends only on whether $X > 0$ in cases where the *Government* will never mobilize.

Figure 14 represents the proposition graphically, in cases where the *Government* would mobilize in response to a warning, but not to a non-warning. Above the surface, the attacking *Militant* gives warnings. Below the surface, it does not.

²⁹There is also a possibility that the *Government* could mobilize regardless of the signal, in which case the attacking *Militant* always receives $D_2 - G$ and is indifferent between warning and not warning. We would specify the *Militant's* behavior as necessary to sustain the equilibrium.

Figure 14: Attacking Militant's Signal When Government Mobilizes Selectively



(Government Mobilizes Only If Warned)

In interpreting the figure and the proposition, it is important to consider what it means to collapse D_1 and D_2 onto a single axis. In effect, we are treating these parameters as if they represent a single variable, “expected damage sacrificed.” Empirically, we expect that with advance warning of an attack, a government can dispatch police to the scene of the emergency, evacuate people, and attempt to thwart the attack (e.g. by defusing the bomb). The damage sacrificed is likely to depend upon the competence of police and bomb squads, and also on the type of target attacked. If the target is a specific person, for example, the damage sacrificed may be quite high, because the intended target may be moved out of the way, spoiling the attack entirely ($D_2 = 0$). If the target is a group of people, police may succeed in moving some of them out of the way, but some may still be harmed. D_2 will be non-zero, but overall, $D_1 - D_2$ will be relatively high. However, if the target is something that cannot be moved, a building for instance, D_2 will not be much smaller than D_1 . Attacks on physical property, particularly buildings and other large, immobile property, will have relatively low values of $D_1 - D_2$. Because the damage sacrificed is lower, *Militants* will have greater incentive to give warning when attacking property targets, as opposed to human targets. We can derive four testable hypotheses from Proposition 1:

H1: *Militants are more likely to give warnings when they pay a high political cost for causing excessive civilian casualties.* In concrete terms, certain militant groups may require the support, or at least the acquiescence of certain political audiences. If those audiences hold casualty averse preferences, the militant group may give warnings to prevent excessive casualties from the attack.

H2: *Militants are more likely to give warnings when responding to warnings carries a high cost for the government.* For instance, militants have incentives to give warnings when they attack economically critical areas. Evacuating and searching those areas imposes costs on the state’s economy. Deliberately imposing these costs may be a useful coercive tactic for the militant group.

H3: *Militants are more likely to give warnings when doing so does not greatly reduce the expected damage*

from an attack. For instance, if an attack targets physical property such as shops and infrastructure, a warning sacrifices relatively little expected damage. The damage sacrificed will also vary based on the government's emergency resources: whether it can pre-position fire crews at the scene of a threat and whether it has competent explosives experts to locate and defuse bombs.

H4: *In cases where the government cannot mobilize at all, militants who face any cost for harming civilians will warn the government.*

The logic of H4 is simple and rather cynical: When the *Government* cannot afford to mobilize, there are no tradeoffs for the attacker. Warning avoids the political cost of harming civilians without any risk of a bomb squad finding and defusing the device. The attacking *Militant* gives warnings *because it knows the warnings will never be heeded.* Empirically, one might observe militants warning a disorganized government with no capacity to mobilize; warning the government before attacking targets that are too difficult to evacuate (stadiums, city centers, etc.); or warning the government before attacking distant rural areas or busy urban areas that are hard for emergency services to navigate. In these scenarios, the attacker's warning is self-exculpatory but empty because no one expects the government to mobilize.

Result 2: Militants Give Truthful Warnings and Governments Mobilize In Response

Recall that in cases where $D_1 - D_2 - G + Z > 0 > D_1 - D_2 - G - X$, attacking *Militants* and the *Government* have compatible incentives. The attacking-type *Militant* prefers to give warnings when such warnings can induce a *Government* mobilization. The *Government* prefers to mobilize when it knows it has received a truthful warning. The only factor that can prevent cooperation of this type is incomplete information, specifically the *Government's* uncertainty about the *Militant's* type. This uncertainty arises from two sources. First, the *Government* may receive a prank warning with probability ω . In addition to this problem of random noise in the signal, the *Government* also knows that non-attacking *Militants* may choose to give false warnings of their own. However, given sufficiently high penalties (Y) for non-attacking *Militants* who give warnings, both *Militant*

types will signal truthfully. They will continue to signal truthfully whether or not the *Government* mobilizes in response to warnings it receives. The conditions for this result are:

1. $D_1 - D_2 + Z > G > D_1 - D_2 - X$
2. $Y > (1 - \omega)G$
3. $X > 0$ (and when indifferent, attacking *Militants* do not warn)
4. When indifferent between warning and not warning, non-attacking *Militants* do not warn.

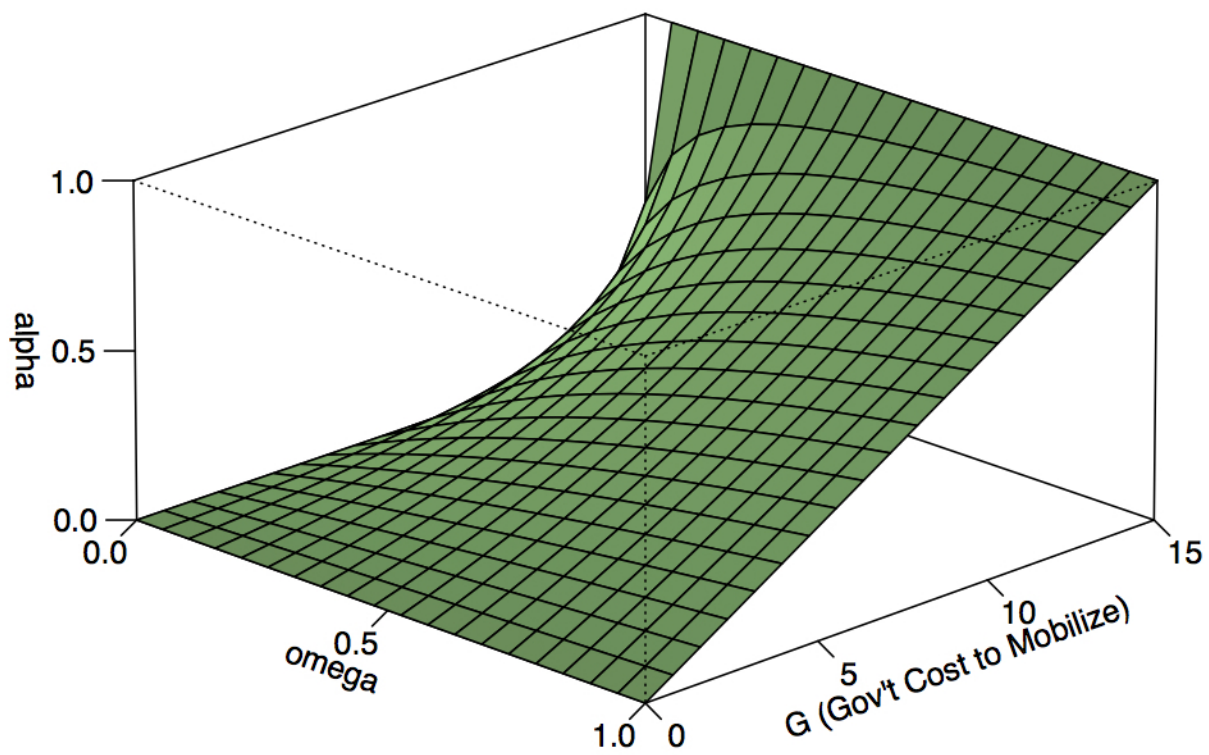
Because both *Militant* types are signaling truthfully, the *Government* is able to update its beliefs. $\theta_W = \frac{\alpha}{\alpha(1-\omega)+\omega}$ giving a condition of $\alpha > \frac{G\omega}{D_1-D_2+Z-G(1-\omega)}$ for the *Government* to mobilize when warned. Having met the conditions discussed in Result 1 ($X > D_1 - D_2 - G$ and $X > 0$), the attacking *Militant* sends warnings regardless of the *Government's* anticipated response. $\theta_{-W} = 0$ and the *Government* never mobilizes upon receiving non-warnings.

Figure 15 (on page 135) represents this condition. Above the surface, the *Government* mobilizes only in response to warnings. Below the surface it never mobilizes, regardless of the signal.

There is also the possibility that non-attacking *Militants* face a Y penalty too low to deter them from giving warnings – formally, $(1 - \omega)G > Y$. *Militants'* signals “pool” and the *Government* receives a warning regardless of the *Militant's* type. The *Government* cannot update its beliefs based on the signal, and the prior probability of attacks (α) may or may not be sufficient to justify mobilization. The *Government* mobilizes if $\alpha > \frac{G}{D_1-D_2+Z}$. Both types of *Militant* continue to warn, regardless of the *Government's* anticipated response. The conditions for this result are:

1. $D_1 - D_2 + Z > G > D_1 - D_2 - X$
2. $(1 - \omega)G > Y$
3. $X > 0$ (and when indifferent, attacking *Militants* do not warn)
4. When indifferent between warning and not warning, non-attacking *Militants* warn.

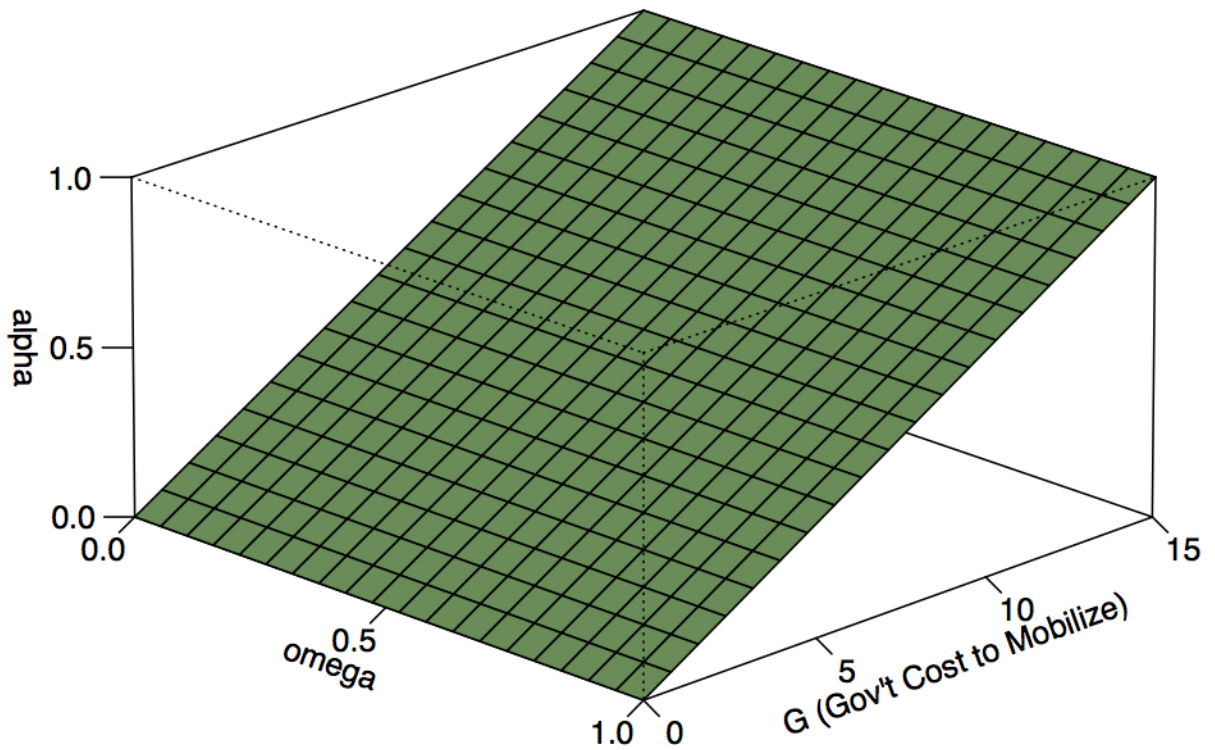
Figure 15: Government Response to Warnings When Militants Signal Truthfully



D1=20, D2=10, Z=5

Figure 16 shows the condition for *Governments* to respond to warnings under conditions of signal pooling. Above the surface, the *Government* mobilizes only in response to warnings. Below the surface, it does not mobilize in response to warnings or to non-warnings.

Figure 16: Government Response to Warnings When Militants Pool On Warning



D1=20, D2=10, Z=5

Although there are differences between the figures, the condition portrayed in each is broadly similar. When *Militants* signal truthfully, the *Government* mobilizes if it receives a warning and $\alpha > \frac{G\omega}{D_1 - D_2 + Z - G(1-\omega)}$. When both types of *Militant* warn, the *Government* mobilizes if it receives a warning and $\alpha > \frac{G}{D_1 - D_2 + Z}$. In either case, the *Government's* decision to mobilize depends upon

the cost of mobilizing (G), the expected damage saved by mobilizing ($D_1 - D_2$), and the political penalty (Z) the *Government* will pay if it ignores a truthful warning. We can summarize these findings in a general proposition:

Proposition 2 (*Government incentives for mobilizing*)

Assuming that attacking *Militants* warn, the *Government's* incentive to mobilize when warned:

1. *Decreases* as the *Government's* cost of mobilizing (G) increases
2. *Increases* as the expected damage saved ($D_1 - D_2$) increases
3. *Increases* as the political cost for ignoring truthful warnings (Z) increases

Looking at the role of G , D_1 , and D_2 , the *Government's* incentives to mobilize increase as the attacking *Militant's* incentive to warn decrease. This is because whatever utility the *Government* loses via G , D_1 , and D_2 , the attacking *Militant* gains. Not all the utilities are zero-sum, however. In the same way that X (the cost of harming civilians) incentivizes the attacking *Militant* to warn, Z (the cost of ignoring truthful warnings) incentivizes the *Government* to mobilize when warned. An observed pattern of warnings and responses is, to some degree, a story of political accountability encouraging *Militants* and *Governments* to cooperate in a way that saves lives. We can derive several testable hypotheses from Proposition 2:

H5: *Governments are more likely to mobilize when the damage saved will be high.* For instance, governments will be more likely to mobilize when attacks endanger people who can be moved out of the way, or when their security forces are highly capable of defusing bombs.

H6: *Governments are less likely to mobilize when doing so is costly.* As mentioned in the explanation of H2 above, response costs will be higher if governments have to evacuate busy urban areas or areas of economic significance.

H7: *Governments are more likely to mobilize if key audiences will impose political costs on the govern-*

ment for ignoring truthful warnings. In concrete terms, ignoring truthful warnings may be costly if governments face competitive political systems and news media that will report whether security forces responded to a warning or ignored it.

Result 3: Noise May Hinder the Government or Help It by Keeping Militants Truthful

The main difference between Figure 15 and Figure 16 above is that in Figure 15, the parameter ω affects the curvature of the surface. At low values of ω , the curvature is greatest. Assuming a relatively high starting value of G , small increases will require very large corresponding increases in α (the prior probability of attacks) for the *Government* to mobilize when warned. Assuming a relatively low starting value of G , further increases can be offset by very small increases in α , so that the *Government* will still mobilize when warned.

Yet as $\omega \rightarrow 1$, the surface loses curvature. This is because at $\omega = 1$, it is impossible for non-attacking *Militants* to give non-warnings that reach the *Government* unchanged. Attacking and non-attacking *Militants'* signals effectively pool, and the condition for *Government* mobilization becomes: $\alpha > \frac{G}{D_1 - D_2 + Z}$, with the critical value of α a simple, linear function of G . This is the same condition represented graphically in Figure 16. The only difference is that in Figure 16, the pooling results from non-attacking *Militants'* false warnings, not from the random noise of pranks.

Now note that the value of α required by the *Government* to justify mobilizing is as low or lower in the case where non-attacking *Militants* do not warn (Figure 15), compared to the pooling case (Figure 16) where the non-attacking *Militant* warns. Mobilization is always easier to sustain in the semi-separating case, because for any combination of parameter values, $\frac{G\omega}{D_1 - D_2 + Z - G(1-\omega)} < \frac{G}{D_1 - D_2 + Z}$. By implication, things that discourage the non-attacking *Militant* from warning help to sustain the *Government's* mobilization.

Prank warnings serve such a role. Occurring with probability ω , pranks mobilize the *Government* without requiring the *Militant* to pay Y . The non-attacking *Militant's* condition for not warning a

Government that will mobilize in response is $Y > (1 - \omega)G$. A high rate of prank warnings drives the right side of the inequality toward zero, making warning a less appealing strategy for the non-attacking *Militant* and requiring only a small Y to deter the *Militant* from warning.

Recalling that in the pooling case (Figure 16), the frequency of pranks makes no difference in the *Government's* condition to mobilize, a hypothetical increase in ω would have no down side for the *Government*, and would actually be helpful if it crossed the critical threshold at which the non-attacking *Militant* is deterred from warning. Prank warnings at this threshold increase the *Government's* ability to mobilize and spare civilians from harm. It is only beyond that threshold, in the semi-separating case where the non-attacking *Militant* has already been deterred from warning, that prank warnings begin to reduce the *Government's* incentive to mobilize when warned. Within that semi-separating case, however, the *Government* is always better off, until ω reaches a value of 1 and the condition for mobilizing becomes identical to that in the pooling case. We can summarize these results in a proposition:

Proposition 3 (Prank warnings and political penalties keep non-attacking *Militants* truthful)

Given the non-attacking *Militant's* condition to refrain from false warnings, $Y > (1 - \omega)G$, the incentive to warn falsely:

1. *Decreases* as the probability of prank warnings (ω) increases
2. *Decreases* as the political cost for giving false warnings (Y) increases
3. *Increases* as the *Government's* cost of mobilizing (G) increases

We can derive three testable hypotheses from this proposition:

H8: *Militants are more likely to give false warnings if mobilizing is costly for the government. As mentioned in the explanation of H2 and H6, response costs will be higher if governments have to evacuate busy urban areas or areas of economic significance.*

H9: *Militants are less likely to give false warnings if doing so carries a high political cost.* Empirically, the costs of false warnings will be higher if the militant group's political strategy depends on honest communication – in diplomatic negotiations, in appeals to local populations it wishes to govern, or in warnings about actual attacks where a government mobilization is essential to saving lives. Another interpretation of Y is as a cost that militant groups impose on their own cells. Granting that different cells may carry out different attacks, militant leaders may threaten to discipline those who warn when not authorized to do so. This might occur if $D_2 + G > D_1$, such that attacking *Militants* prefer the payoff from warning and inducing a response to the payoff from warning a *Government* that will not respond. So that attacking cells can carry out the group's armed campaign more effectively, the leadership of a militant group might threaten to expel, "kneecap," or otherwise punish cells or members who warn when not actually attacking.

H10: *Militants are less likely to give false warnings if there is already a high probability of prank warnings* Empirically, we may see a high volume of prank warnings if technologies (telephones, email, text messages, social media, etc.) make it easy for pranksters to give anonymous warnings that cannot be distinguished from those of actual militants. We may also see a high volume of prank warnings directed at particular targets that are focal points of politics, popular culture, and business. If pranksters are already giving a high volume of credible-sounding warnings about attacks on a target, militants have less reason to do so.

6.2 Hypothesis Testing

In this section, I use evidence from my IRA and ETA case studies to test hypotheses about the communication of warnings and the government response to them. Testing these hypotheses is somewhat more complicated than testing Hypotheses 1-3 earlier. The difficulty arises from the zero sum nature of certain payoffs in my model. Hypothesis 5, for instance, states that governments are more likely to mobilize in response to warnings when the damage saved ($D_1 - D_2$) will be high. Hypothesis 3, discussed earlier, states that militants are likely to warn when doing

so does not greatly reduce the expected damage from an attack. Looking at any one incident, evidence presented in favor of one hypothesis seems necessarily to contradict the other. (If the damage saved by the government was high enough to justify a mobilization, why did the militant group decide to give a warning in the first place?) The same is true of Hypothesis 6 (governments are less likely to mobilize in response to warnings when mobilizations are very costly) and Hypothesis 2 (militants are likely to warn when doing so is costly for the government). The non-zero sum nature of the penalty parameters Y and Z helps to explain why warning could be in a militant group's best interest at the same time that responding is in the government's best interest. But on the equilibrium path, the players in the model may not incur these penalties. By implication, then, we should not see actual militants and governments incur them. Two strategies can help us unravel this logical knot. First, we can ask former conflict participants which costs and benefits they weighed in making their decisions about whether to warn and whether to respond. Second, we can look for informative accidents. The actors in the model may never incur costs on the equilibrium path, but reality is messier than theory. There are cases where militants intend to give warnings but technical failures prevent them from doing so. The La Mon restaurant bombing and Bloody Friday are two examples. These cases allow us to observe and measure political costs the actors usually avoided by engaging in equilibrium warning behavior. In other cases, we may see police respond ineffectively to warnings, despite their best intentions to evacuate people from harm's way. The Hipercor bombing by ETA is one example. Despite our inability to observe the non-zero sum costs when militants are warning and governments are responding, these informative (and above all else tragic) cases can show us what the costs would have been, had the actors chosen not to warn or not to respond on a regular basis.

6.2.1 Testing Hypotheses 4, 8, and 9: Come-Ons, Hoaxes, and Empty Warnings

[Y]ou would treble the effect of just planting one bomb by issuing other hoaxes at the same time.

— Republican #2

Hypotheses 4, 8, and 9 pertain to cynical warning behavior by the militant group. Hypothesis 4, for instance, states that in cases where the government absolutely cannot respond, militants with

any political cost for harming civilians will give warnings. In essence, militants will give warnings when they know those warnings will be useless. This hypothesis is borne out by evidence from my interviews of Northern Ireland police. Police interviewees cited cases where IRA members hand-delivered bombs to small business targets such as pubs and lunch counters. The IRA volunteers delivering the bombs did not call police before delivering the bombs, but instead shouted a warning to people in the shop, telling them to leave. In principle, such a warning could allow meaningful evacuations of the targeted restaurants (by the patrons on their own initiative), but some of these bombs had such short fuses that, in the words of the high-level RUC Special Branch source, “only your people could get out.” The goal of such warnings, the source argued, is not to allow “anyone else in the shop to get out into the street.” Rather, the goal is to allow the group to “manage their own public relations” after the fact, by claiming that in every case, the group gave a warning. In cases where people were killed or seriously injured by reckless or indiscriminate tactics, the IRA could then claim “that was a mistake with the device” or a mistake in “understanding how long the warning would actually be” – a failure of implementation, rather than evidence of inhumane intent. By this account, IRA behavior upheld the prediction of Hypothesis 4.

Skipping ahead in numbers, Hypotheses 8 and 9 jointly predict that militant groups will give false warnings when they can impose high costs (G) on the government and the political cost for giving false warnings (Y) is not especially high. Empirically, we should expect militants to describe their own cost/benefit calculations as a comparison of how much damage can be done with false warnings, versus how much the militant group values its own future credibility. Recalling from the IRA case study, truthful bomb warnings served both to spare non-combatants and to impose added costs to the Northern Ireland economy, beyond the damage caused by explosions themselves. It was one thing to destroy a physical object or building, and another to force the shut down of an entire neighborhood or transit system as police frantically evacuated people and searched for the bomb. The same disruption could also be achieved without the use of a real bomb if the IRA gave hoax warnings and police responded to them. The IRA could also use hoax warnings to draw security personnel into “come-on” ambushes.

Come-on attacks used various forms of deception: false warnings, vague warnings, warnings that mentioned only one bomb when in fact there were several, and warnings that led to hoax devices when there were real devices nearby. In some cases, the IRA would telephone false warnings about bombs in particular places, stationing observers nearby to watch police as they responded to the warning. After noting how police approached the area, how they cleared it, and the positions taken up by police in the protective “cordon,” the IRA would carry out a come-on operation, issuing another false warning and ambushing police as they attempted the evacuate, clear, and cordon response. Such incidents were so pervasive, according to an RUC Special Branch intelligence expert, that “uppermost in your mind” when responding to warnings “was that every single one of them was a come-on. Every single one.”

Even when planning a real commercial attack, the IRA would look for ways of attacking police who responded to the warning. According to John O’Hagan, an IRA member twice imprisoned for explosives-related offenses, it was a “very rare occasion that [the IRA] didn’t look for the second opportunity.” The opportunity might involve planting a second device or a sniper at the scene of the bombing. (Republican #1 recalled that it was always “open season if somebody could have a shot” at the RUC.) Or the opportunity might involve booby trapping the commercial bomb itself. The Army unit tasked with responding to IRA bombs in Northern Ireland lost twenty explosives experts during the conflict (Ryder 2005: 46) Several were killed by booby trapped devices, otherwise standard-looking bombs with hidden components that detonated when a weapons expert attempted to disable the bomb.

Antton Etxebeste recalled ETA using similar tactics. The group booby trapped its bombs, planted extra devices at the scene, and took shots at security forces as they approached. Another favorite tactic was the *cazabobo*, literally “fool hunter,” the attachment of bombs to Basque flags and other illegal items that police would notice and attempt to remove, with deadly consequences. Warnings, coupled with all of these tactics, imposed heavy response costs on Spanish and British security

forces. (They also made it difficult to defuse IRA and ETA bombs, a fact my interview subjects repeatedly noted.)

The IRA also used false warnings and dummy devices to induce police evacuations unrelated to any real bomb threat. The group's commercial bombing campaign was intended to cause disruption, via the bombs' physical effects first of all, and also by forcing evacuations and traffic diversions in the middle of the business day. The IRA realized that hoax warnings could create the latter effect without the need for a real bomb. Hoax warnings might be interspersed with truthful warnings on a particularly busy day of attacks. Republican #2 recalled:

If on the same day you planted one bomb but you give three other bomb warnings, you could cause major disruption: traffic disruption, business disruption, you would treble the effect of just planting one bomb by issuing other hoaxes at the same time.

The IRA also made false threats that stood on their own. Pure hoax warnings could be incredibly disruptive, while physically endangering no one and costing the IRA virtually nothing to carry out. IRA used such tactics extensively during the later part of the conflict. A December 17, 1991 IRA threat against London mainline rail stations induced the British Transport Police and Scotland Yard to shut down the entire London commuter rail system. A small bomb detonated near one rail station, but overall, the "attack" was a massive hoax that stranded 1,000 trains and 450,000 commuters and caused £50 million in financial losses. The IRA used hoax tactics against English highways on March 26 and April 3, 1997, at a stage in the conflict when actual violence might have set back peace negotiations. These hoaxes caused £80 million in economic losses but harmed no one physically. Another series of bloodless hoaxes from April 18-21, 1997 shut down most of England's major transport infrastructure, including London Heathrow, Gatwick, Luton, and Stansted airports, the M6 highway, major rail lines around Leeds, London Tube stations, and Trafalgar Square. According to John O'Hagan, the IRA nicknamed these hoax tactics "the 10p," after the ten pence cost of making a pay telephone call.

Although ETA and the IRA behaved similarly in many respects, one important difference in their

behavior concerned the issuance of hoax warnings. ETA issued misleading warnings to draw government security personnel into dangerous situations, but it did not engage in pure hoaxes – warnings with no relation to any real attack. Antton Etxebeste explained that false warnings “would have discredited us.” By refraining from pure hoaxes, ETA sought to maintain a reputation for, if not trustworthiness, at least credibility. “ETA never lies” outright, according to Etxebeste. “Never. Precisely so that the credibility of the organization was complete.” To check the truth of this claim, I consulted high-level *Guardia Civil* counterterrorism experts. Although they did not wish to be cited or quoted directly, they confirmed Etxebeste’s account. ETA used incomplete and misleading warnings to attack the *Guardia Civil* and police, but the group never engaged in outright fabrication, the way the IRA did in its massive hoaxes of the 1990’s. When ETA called on the phone, Spanish security officials could be sure that something terrible was about to happen, to someone else or to them, depending on what ETA had in store.

Given the other similarities between ETA and the IRA, why did the groups adopt such different behavior with regard to hoax warnings? My formal model suggests that the difference should be attributable to different values of the G and Y parameters, representing the response costs that can be imposed on the government and the political cost the group expects to pay for lying. The costs the groups imposed on security forces were comparable. ETA could easily have given false warnings about attacks on Spanish transit targets, inflicting economic costs just as heavy as those the IRA imposed on Britain. ETA chose not to, however.

The difference appears to be related to the political costs of lying, here interpreted as the cost of lost credibility. Antton Etxebeste referenced three specific disasters in ETA’s past, in which the group had given warnings and the Spanish government had not acted on them. Two were the attacks on *casas cuarteles* in Zaragoza and Vic, disasters ETA brought on itself by attacking the living quarters of police and their families, assuming that warnings would cause the families to leave, or at least provide ETA with moral cover if the families did not leave and ETA’s bombs killed them. The third disaster was that at Hipercor. In that case ETA did give warnings forty minutes in ad-

vance, allowing police enough time to clear the supermarket before the bomb exploded in the car park below. But police failed to act in a timely and effective fashion. In civil proceedings, Spanish courts later found police responsible for the deaths of the Hipercor victims, citing a slow response by police, and their failure to search the car park with sufficient care to find the bomb. After clearing the building once, police allowed shoppers back in. This information came out over a matter of months, however. In the immediate aftermath of Hipercor, ETA paid the political price for the twenty-one deaths. The day after the bombing, 750,000 people packed the streets of Barcelona in massive street demonstrations against ETA and its violence (Delaney 1987). This did not happen in Northern Ireland after Bloody Friday, the La Mon bombing, or the Omagh bombing, the three worst atrocities of that conflict. The IRA definitely paid political costs, particularly in the loss of international financing from America, but there were no mass street demonstrations by the public. At any rate, Bloody Friday, La Mon, and Omagh were caused by Irish Republicans' own errors: inadequate warnings, garbled warnings, or setting off too many bombs at once. The Hipercor attack was a bloodbath because police dismissed ETA's warning after a belated and superficial check of the premises. ETA paid a political price and it did not forget the experience. Refraining from hoax warnings, according to Etxebeste, was one of several procedures the group adopted to ensure that its credibility was "complete" when it gave truthful warnings. The group's abstinence from pure hoaxes, despite the IRA's engaging in that behavior, is consistent with H9, that militant groups are less likely to give false warnings when the political cost of doing so is high.

6.3 Testing Hypotheses 4, 5, 6, 7 and 10: Phone Chains, Maps, and Codes

You knew that it was serious when they said "Have you got a pen and paper?"— Journalist #1

To test Hypotheses 4-7 and 10, I consider the communication process that the IRA and ETA used to issue their warnings. It is difficult to observe all of the political costs and benefits that the IRA, ETA, and government officials considered in deciding whether to give warnings and whether to respond. However, the actors in these cases developed an extraordinary set of procedures for the communication and authentication of warning messages. They did not settle on these procedures by accident. By examining the procedures and asking conflict participants to explain the under-

lying logic, I develop a picture of the cost and benefit calculations made by each side. I also gain insights about how each side viewed the other, including the cost and benefit calculations each assumed *the other* was making, when deciding whether to warn or whether to respond.

The IRA and ETA wanted to give warnings for their commercial bombings, but if the groups could not communicate messages in a timely and credible fashion, the police response would be ineffective or non-existent. To complicate matters further, police could still ignore whatever warnings they received if they judged it not to be in their own best interest to respond. Given the circumstances, the IRA and ETA selected the means of warning not only for the effectiveness of conveying the message. They also considered the role the communication mechanism could play in structuring police incentives about whether to respond.

The IRA had different methods of communicating a bomb warning, depending on the tactical details of the attack. The most direct method of giving warning was for one of the attackers to shout the message to people in the vicinity of the target. This removed the element of uncertainty over police behavior. “[I]f a device was carried into the shop by masked men,” Republican #2 explained, “the shopkeeper would be directly informed: ‘This is a bomb! Get everyone out!’” The IRA used this method with small, short-fused bombs — a type used to attack pubs and other crowded locations where bombs could not easily be hidden, or where a longer-fused bomb planted in advance might be picked up and moved by some unsuspecting civilian. But short-fuse bombs and in-person warnings were inherently risky. If the bomb went off prematurely or the bombers failed to set it down before the timer reached zero, the operation effectively became a no-warning attack – and a disaster for the bombers. The October 23, 1993 Shankill Road fish shop attack is one infamous example. Two IRA volunteers disguised as delivery men brought a bomb into Frizzell’s Fish Shop, hidden under a tray of fish. The IRA’s intended target was a meeting of the Ulster Defence Association, a loyalists paramilitary group, purportedly taking place in a room above the shop. The bomb’s eleven-second fuse went off before the IRA men could shout a warning. The attack killed ten people, including two girls, ages seven and thirteen, and one of the bombers.

When the IRA employed the less risky methods of hiding a device in the target area or driving the device in the form of a car bomb, the group typically gave a warning by telephone. Members of the IRA would inform police and often the target business of the impending attack. According to convicted bomber Dinker McClanahan, these warnings might be given by a spotter, who after following the bomb team “to make sure everybody’s getting away . . . just drove over to the nearest telephone.” Another common practice, according to the RUC Special Branch intelligence expert, was to have an IRA commander at the battalion level or higher make the warning call from a location far removed from the attack. The caller would know the target of the attack and the time the bomb was set to go off. She or he would be more experienced and under less stress than volunteers placing the device. The caller would also be able to choose a telephone based on convenience. The advantage of this method was that the caller was less likely to garble the details of the warning. The drawback was that if a bomber left a device in the wrong place, parked a car bomb on the wrong side of the building, got stuck in traffic, or was stopped at a police checkpoint, the warning caller would not know this. She or he would make the warning call as if the operation had gone as planned. The consequences could be terrible, with police moving people to the wrong area, possibly taking them closer to the bomb. The twenty-nine fatalities in the 1998 Omagh bombing (carried out by dissident Republicans who rejected the peace agreement) appear to have resulted from this type of failure (BBC 1998).

These dangers notwithstanding, the IRA incorporated yet another layer of complexity into its warning procedure: the use of a third party intermediary. Rather than calling police directly, the IRA typically called a third party not affiliated with the police or the government, and made that party relay the warning message to police. This procedure became institutionalized as the Troubles dragged on. For the crucial middle link, the IRA might phone charity organizations, members of the clergy, hospitals, news organizations, taxi cab companies, and even insurance companies.³⁰ According to Dinker McClanahan, those making warning calls generally chose an intermediary

³⁰The examples of taxi and insurance companies were offered by a former taxi dispatcher and Journalist #1.

“with credibility or with stature within the local community,” so that police would believe the warning message. Response time was critical however, so the middle party could be “anybody who you thought was going to lift the phone immediately. The last thing you wanted was to be ringing and ringing and there’s nobody.”

The IRA frequently communicated warnings to the Samaritans organization, a charity that operates 24-hour suicide hotlines in the UK and the Republic of Ireland. The IRA also placed warning calls to the switchboards of news organizations, including the BBC, The Irish News, and RTÉ (Irish state broadcasting). Journalist #1, who worked at a news organization that received many warnings, gave a detailed description of the process of handling these calls:

The call would come through to the switchboard and staff were trained to handle such calls because they were reasonably frequent. ... The staff ... were trained to ask specific information. They would sometimes ask them [the IRA] to repeat information as well if they were unclear. ... Usually they would say the message they wanted to say, that there’s a bomb at such-and-such a place and it’s timed to go off at such-and-such a time. ... Sometimes you don’t get that much detail. They would just say there’s a bomb in the street, or a certain area. ... You knew that it was serious when they said “Have you got a pen and paper?” because they want the information to be recorded accurately and they would speak more slowly and more deliberately to make sure that you get the information, so that it’s passed on properly to the authorities.

ETA also used a system of intermediaries to communicate warnings to police. According to Anton Etxebeste, the intermediaries could be “various agencies of a public, institutional character ... the Red Cross, radio stations ... or other organizations.” In addition to making phone calls through intermediaries, ETA also provided its intermediaries with physical maps that could be used to locate bombs. According to Etxebeste, ETA used maps to increase the precision of its warnings when attacking tourist beaches and the Spanish railway system.

A bomb might be buried under a particular section of beach or railroad, with an electronic fuse set to go off weeks later at a specific time. ETA would know the time and precise location of the attack, but the sand dune or rail trestle in question would not have a street address. ETA needed a different means of describing the location of the bomb so that police could find and evacuate the

threatened area in a timely fashion. Etxebeste recalls that days or weeks in advance of a bombing (or bombings), a map “was deposited ... in an impersonal mailbox” for “the media or an organization like DYA [a Spanish emergency service] to pick up.” ETA would call the intermediary organization, inform them that “there is a map,” and tell them where to find it. The map would show the section of coastline or railway in which the bombs were hidden, but it would not show the precise locations of the bombs. As such, intermediaries and police would not have enough information to locate ETA’s bombs using the map alone. On the day of the attack, minutes or hours before the explosion, ETA would telephone the intermediary organization again, informing them that bombs were “more or less in this area of the beach” or “from this kilometer to that kilometer” of the railway shown on the map. The phone call would give police just enough time and information to evacuate civilians from the targeted area. However, because the map itself showed a sufficiently large area to be useless without the phone call, ETA could use the same map for different bomb attacks throughout a campaign.

The use of intermediaries, drop boxes, and maps introduced additional risks of human error corrupting the warning process. The IRA and ETA had reasons for communicating in this way, however. First, the intermediary system eliminated risks of police tracing a warning phone call and arresting the person making it. Second, the intermediary system imposed accountability on police and other emergency responders.

Several IRA interviewees alleged that police and British military or intelligence personnel, working in collaboration, ignored bomb warnings by the IRA, intentionally causing non-combatant fatalities to undermine the IRA’s support. Recalling Mao’s metaphor of the fish and the sea, Republican #4 suggested that UK authorities would “[l]et the bombs go off. Let a couple of civilians be killed” to “pollute the sea.” None of the Republican interviewees could cite a specific occasion when police or the army ignored a bomb warning, but the belief that the authorities ignored warnings goes back at least to Bloody Friday. In an interview years after the event, IRA Chief of Staff Seán Mac Stíofáin explained:

It required only one man with a loud hailer to clear each target area in no time. ... Republicans were convinced that the British had deliberately disregarded these ... warnings for strategic policy reasons (BBC 2002).

The RUC Special Branch intelligence veteran offered a different interpretation of events, arguing that the IRA failed to appreciate the complexity of responding to bomb warnings. The police organization had its own internal phone chain, which the IRA could not see, stretching from a headquarters switchboard and Force Control office, to Belfast Regional Control or the divisional or subdivisonal headquarters corresponding to the target location, to a dispatcher who would notify RUC patrols of the alleged bomb in their area. IRA spotters might be watching the scene of a bomb, and police might be in the vicinity doing absolutely nothing to evacuate the area. "The brutal fact," according to the RUC veteran, was that the warning "may not have gotten around to them because of the chain that it had to go through." Police who appeared to the IRA as if they were dragging their feet or ignoring a warning were just as ignorant as the shoppers and other civilians in the vicinity. By the time police at the scene were alerted to the bomb, they might have very little time left for the evacuation. IRA members like Seán Mac Stíofáin would have interpreted any casualties in these attacks as intentional malfeasance by police, committed for "strategic policy reasons."

Antton Etxebeste expressed a similarly cynical view of Spanish police. Although ETA accepted responsibility for the attack at Hipercor and expressed regret at the deaths it had caused, Etxebeste describes the group's lingering anger about the behavior of police that day. ETA's mistake, Etxebeste argues, was "overconfidence" in the police. Police, through some combination of disbelief, laziness, or disinterest in saving ETA from the consequences of its own behavior, "set a trap for us." ETA "fell into the police's trap" by showing too much faith and giving police too many ways of evading responsibility for the damage caused by their inadequate response. After Hipercor, ETA assumed that police would ignore bomb warnings or drag their feet intentionally so that people would be harmed by ETA's bombs. Because "the police themselves might not acknowledge the warning and might set a trap for us," ETA instead placed its warning calls through third party intermediaries – often several at a time. The intermediaries would pass the messages on and if

police failed to act, the intermediaries could later verify that the group had given warnings and the casualties were (at least by ETA's reckoning) the fault of police.

IRA members offer a virtually identical explanation for their group's use of intermediaries. Republican #4 describes the group's use of media switchboards as a way "to get a witness" and have it "on the record" that a warning was given. If police failed to respond or responded too late to save civilians at the scene, the intermediary could also verify the approximate time the warning was given and what information it contained. If police knew that journalists and charity workers had this information, they could not ignore a warning and escape accountability for having done so. The IRA leveraged police accountability even further by making redundant warning calls, using "a number of organizations to spread the warning and to get the information out" (Journalist #1's words). Redundant channels hedged against "misunderstanding or difficulty in forwarding the communication," according to Republican #2. They put the information into the hands of several organizations, who would forward mutually reinforcing warning messages to police, and could offer mutually reinforcing accounts of the IRA's warning later on if the police did ignore the message and civilians were killed by the bomb.

This use of intermediaries, and redundant intermediaries in particular, follows the logic of Hypotheses 5-7. The IRA and ETA knew that police would weigh the costs of responding (G) against the amount of damage that could be saved by evacuating civilians and defusing bombs ($D_1 - D_2$). The IRA and ETA knew they had raised the government's costs of responding by coupling warnings to ambushes. They had also reduced the damage savings police could hope to achieve, by stationing snipers near their bombs and booby trapping the devices to keep army explosives technicians at bay. What was to keep police from ignoring warnings (and imposing heavy political costs on the militant groups by doing so)? Communicating warnings through intermediaries raised the government's political cost (Z) for ignoring truthful warnings and allowing civilians to die. Using intermediaries made the warning public information – not unlike the public threats and promises discussed in the international relations literature on audience costs. That literature

argues that leaders will leverage their own accountability to structure their future payoffs – making it impossible for them to back down from deterrent threats. The IRA and ETA gave warnings through intermediaries to leverage their *opponents'* accountability, structuring police's future payoffs so that failing to respond to a warning carried prohibitively high political costs.

ETA and the IRA appear to have overestimated the cynicism of Spanish and British police, however. All of the RUC officers I interviewed expressed the same belief that it was their duty as civil servants to investigate each bomb warning they received. One former RUC officer at the rank of Chief Superintendent explained:

[T]he only issue you had was somebody's telling me there's a bomb somewhere. Do I believe them? Is it a come-on? Or is it real? In any case, my duty as would be that of any other public servant in any other part of the world — and that's what we were, public servants — to try to minimize loss of life. And we had no choice but to go.

This did not mean that the RUC put the same degree of energy into investigating every bomb warning. Police did balance costs and benefits of responding, and in cases where the warning did not sound credible, they invested relatively little time in investigating it. Former police there, including the very high-level RUC Special Branch source, describe a “graduated response” to warnings based on their apparent credibility. Warnings that sounded “childish” or otherwise unlikely to be authentic received “a cursory check” but perhaps not any attention beyond that. Warnings that sounded credible received the RUC's full and persistent attention. The specter of accountability may have influenced police and other government officials at the policy level, where people made decisions about standard operating procedures and how risk averse to be in investigating threats at each “graduated” level. For instance, after a particularly costly hoax shut down English transit infrastructure in 1997, the British transport secretary stated that his preference was to investigate every threat rather than “risking death and injury to the public” (Sengupta 1997). As a high-level RUC source put it, “you were always dealing with people's lives.” My IRA and ETA interviewees discuss police incentives in the cynical terms of my formal model, where governments may rationally decide to ignore bomb threats against their citizens. But in both the ETA and IRA cases, the manipulation of *Z* seems to have been a step beyond what

was necessary to get police to respond. On the other hand, the use of intermediaries was helpful in resolving a separate issue: trust.

6.4 The Importance of Trust

You have to trust your enemy as well as your friends, don't you? – Republican #1

From the beginning of the Troubles, police dealt with a high volume of hoax warnings emanating from people outside the IRA. Available data on the hoax phenomenon are partial, but revealing. The RUC reported 658 hoax incidents in 1971-2. The British Army's 321st Explosive Ordnance Disposal (EOD) unit investigated 572 bomb hoaxes from July 1976 to July 1977, a figure that excludes incidents that the RUC investigated without calling for army assistance. A 1971 report by RUC's Chief Constable expressed police frustration with the hoax problem:

Bomb hoaxes, averaging some twenty each day in the city of Belfast were a dreadful menace and added to the problems of the security forces and the trading and shopping public. Each hoax necessitated evacuation of buildings and diversion of traffic and considering that several areas of the city might be affected at any one time it can readily be appreciated the large number of police required daily for this work.

The IRA sometimes created its own hoaxes to disrupt the local economy. However, non-IRA hoaxes could stretch police resources at the very moment when the IRA needed police to respond to a real bomb. Republican #2 recalled:

[S]ome person, with a few beers in them or not, might decide for any one of one hundred thousand reasons, to issue a few bomb warnings. Now it could be an A-level student under pressure in school. It could be somebody at work who didn't want to be there. . . . You just have to extend your imagination to try and cover all the possibilities. . . . [I]f the IRA had an actual device in an area, but by an unfortunate coincidence some other people were ringing in bomb warnings at the same time causing confusion, that it could result in mayhem.

The inability of police to deal with the bombs on Bloody Friday was at least partly due to hoax warnings received at the same time as the IRA's real bomb warnings (McKittrick and Thornton 2001: 229-230). Even on a day without many warnings arriving simultaneously, there was a fatigue issue. "[T]here were just as many hoax calls as there were genuine calls," Journalist #1 recalled.

“A lot of time and energy and resources was lost on the calls that were hoaxes.”

Consistent with my formal model, a high frequency of hoax warnings (formally, a high value of ω) threatened to render the government unresponsive. Aware of the problem, the IRA sought a way to reassure police about the authenticity of its messages. Even if the IRA could not guarantee the truth of the content (because the group continued to carry out come-ons and hoaxes) the group sought to establish a basic trust that people purporting to speak for the IRA actually did represent the group.

One way of doing this was to make multiple warning phone calls for the same bombing. The IRA reasoned that making several warning calls through different intermediaries would help to convince police that their real bomb warnings were not pranks and did in fact merit a response. An angry drunk or a student trying to get the day off might not have the initiative, pocket change, or phone numbers to call several different intermediaries. So, according to Republican #3, the IRA might make “two or three phone calls [and] once the emergency services see that there’s a number of phone calls we made, they know that it’s probably for real.” ETA adopted similar procedures, making redundant warning calls through intermediaries such as the DYA, Basque media, and the Red Cross.

ETA also used a second technique to differentiate its warnings from those of prank callers: audio manipulation. Initially, ETA developed this technique to *conceal* information from police. According to Antton Etxebeste, ETA used “instruments” to distort callers’ voices, so that if intermediaries recorded the warning calls, the recordings could not be used to identify the voice of the ETA member. Media accounts describe ETA’s warning messages as having a characteristic sound: “a recording, in which is heard the voice of a woman, distorted” (*El Correo* 2008). ETA’s responsibility claims after a bombing also used this manipulated sound, which was readily identifiable by media organizations that received such calls. Etxebeste describes this as ETA’s “authorized voice” (*la voz autorizaba*). The sound acts as “a code of authentication. ... When that voice is put on the

telephone, when that voice calls, that is the voice of ETA.”

ETA’s “code of authentication” was the distortion applied to a woman’s voice in the group’s warning messages. The code made it more difficult for unauthorized individuals to give messages indistinguishable from those of the group. Formally, this technique reduced ω , the probability of prank warnings that cannot be distinguished from those of the militant group. ETA’s audio manipulation represents an endogenous adjustment of ω , made by the *Militant* so that the *Government* can more easily infer the sender’s type from the signal.

The IRA accomplished the same feat using code words. At some point during the Troubles, the IRA began to include secret words in its warning messages to police. This intriguing aspect of IRA-government communication is often discussed in journalistic and historical accounts, but it is widely misunderstood. Even participants in the warning-and-response process — IRA members, intermediaries taking warning calls, and police responding to the calls — misunderstand the true purpose of the words. However, it is now possible, based on interviews of former police and journalists, to ascertain the true purpose of these words, and how they facilitated the communication of warnings and other messages from the IRA to police. These interviews also give important insight into some of the cost/benefit factors influencing police decisions on whether to respond to IRA warnings.

The conventional understanding of code words, recounted by rank-and-file IRA members and intermediaries, is that code words proved the authenticity of IRA messages, allowing police to respond selectively to IRA warnings while ignoring non-IRA hoaxes. Aware of the large volume of false warnings emanating from prank callers, the IRA would generate a code word and circulate it among command-level members of its organization and among intermediaries used to convey bomb warnings. IRA members making bomb warning phone calls would incorporate the code word into their warning messages. As long as the code word did not leak out publicly, intermediaries receiving “coded warnings” would know that the callers represented the IRA. They would

pass the warnings on to police, informing them that the warning contained a recognized code word, and police would respond to the warning. This narrative is seriously flawed.

The IRA would select code words that were obscure and incongruous in conversation (“just something outside your normal speech,” Dinker McClanahan explained). Obscurity drew attention to the word and made it difficult for anyone outside the IRA to guess the code words.³¹ Examples of code words included “Excalibur,” “Wonder,” “Kerrygold” (a brand of Irish butter), and “Martha Pope” (a peace negotiator working under US Senator George Mitchell).³² At the BBC and other news organizations, staff who received warning calls might be responsible for recording the information, but the news editor assumed responsibility for checking the code words and passing the messages on to police. Journalist #1 recalled a high degree of compartmentalization in this process to protect the code words:

Our process at the moment is that if a member of staff receives a bomb warning . . . that a more senior person contacts the police. And we are limited in what we can say, but there are times that the more senior person may not even know what the code word is, because we try and keep it quite tight.

Nonetheless, words did leak out from time to time. On at least one occasion, a newspaper reporting on a bombing at London’s Heathrow airport printed the IRA code word used to make the warning phone call (Leigh 1974). When a leak occurred, or if the IRA had used the same word long enough so that its compromise could be reasonably expected, the IRA changed the word. John O’Hagan explained:

It would be an approach made to all outlets saying that the IRA’s code word is — whatever. And every time the code word was changed they would use the old code

³¹Journalist #2, a former BBC reporter who worked in Belfast, recalled another more complicated system involving two codes within the same message. A call would follow the form: “Hello. This is Paddy. There’s a bomb at [the location of the attack]. The code word is [“Excalibur,” e.g.]” The caller would also append the words “And we’re gonna bomb,” and make reference to one of three specific locations known by BBC reporters as *de facto* code words. The BBC reporter would not identify the locations, and could only recall one of the locations being used in a warning during her/his tenure at the BBC’s Belfast office. Yet s/he was confident that the two other locations would have been recognized as IRA code words at that time.

³²“Excalibur” provided by an anonymous journalist. For other words see Tendler (1984), Harnden (1999: 5), and *The Telegraph* (2000).

word to make the new word activated [sic]. . . . Usually the leadership of the army would do that. . . . There was one code word for the entire IRA structure. And the one code word would be decided, signed off on, by the leadership of the army.

The considerable effort spent by the IRA and intermediaries on generating, distributing, and protecting the code words seems to reinforce the conventional explanation of code words. As Republican #1 dryly put it: "You have to trust your enemy as well as your friends." The IRA and police needed a way to differentiate real warnings from prank calls, so that police could devote their limited resources only to the authentic warnings of the IRA. There are serious problems with this narrative, however.

First, there was no particular place in the phone chain where the warnings and code words converged to allow the authentication of each message. According to Journalist #1, different media outlets "all have their own policies in terms of how they deal with calls." Journalist #1's organization passed the warning on to police, informing them that the warning contained a recognized word, but the organization would not "give out the code words. . . . [S]ome organizations do tell the police what the code word was. We feel that the fewer people know it the better." Further complicating the dominant narrative, intermediaries forwarded all warnings to the police, including warnings that could not be authenticated with a recognized word. According to Journalist #1, it was "for the security side of things to decide if it's a real threat or not. We're not going to sit in judgment on that." As a consequence, the RUC received the full set of unfiltered warnings, including warnings with no code words, warnings with authenticated code words, and warnings purportedly authenticated but not containing the code words themselves. Could the RUC trust intermediaries who claimed to have separated the authentic warnings from the inauthentic, although the intermediaries would not provide the code words to police for double-checking? Ignoring a warning posed great risks if for some reason the intermediary made a mistake.

According to veterans of the RUC's Operations Branch (the branch tasked with responding to warnings) the intermediary's inclusion of the word would not have mattered anyway. RUC stations had no master list of words and no procedure for checking them. The RUC veteran at the

rank of Chief Superintendent recalled:

I served for thirty one years and retired fairly senior in my division. No one was ever able to explain to me this issue of the code words. No one. . . . There was never a list in the police stations of these code words. . . . At least never one that I was ever aware of.

Even if there had been a list of words, the words would not have been used to filter out hoax calls or to prioritize some warnings for quicker response. By the retired Chief Superintendent's account, the RUC treated all bomb warnings with the same degree of urgency:

[T]he right word, the presence or absence of a word made no difference to the response. . . . None whatsoever. Because your only question, the only issue you had was somebody's telling me there's a bomb somewhere.

An RUC veteran with the rank of Superintendent recalled that "you still went and did your job" regardless of whether a warning contained a code word. "I don't want anybody dying because we sat and gazed at our navel wondering what we should do. So my memory is no, if you got a bomb warning, [you would] treat it as legitimate." The high-level RUC Special Branch source agreed with this assessment: "In the end, you were always dealing with people's lives, and if you got a bomb threat you would have been a very brave and in my opinion very foolish person to make the judgment that you weren't going to do something."

The situation on the other side of the Irish Sea was similar. Peter Gurney, a British army Ammunition Technical Officer (ATO) tasked with dismantling IRA bombs in London during the 1970's, recalled that "[f]rom 1973 onwards it was not unusual for the Metropolitan Police to receive up to 200 hoax calls a day, [emphasis original] at least fifty of them with alleged code words. The hoaxers read that this was IRA practice and so invented their own; we had no way of finding out what was real and what was not."

Setting aside the conventional narrative, which clearly does not hold up, what did code words do for the IRA that could justify the effort spent on maintaining this system? There are several answers to this question. First, although police could not ignore no-code warnings, the words did

let the RUC know that certain calls came from the IRA. According to the retired RUC superintendent, police would be informed by their radio dispatcher if “a recognized code word” had been used in the warning call. (Ostensibly, the dispatcher obtained this information via the intermediary passing on the warning.) If the message contained a code word, police would “treat it as the IRA,” assuming a higher base likelihood of a bomb or a come-on attack waiting for them. This assumption could affect the amount of time RUC officers spent investigating an incident before definitively declaring it a hoax. The high-level RUC Special Branch veteran explained that police would take “graduated steps” before declaring a warning a hoax: “[I]f you got a call, [and] you did a cursory check, there was no code word, it wasn’t credible, there was no intelligence to support it, [then] that cursory search and check may have been sufficient.” All things being equal, a code word and no apparent come-on would have increased RUC suspicions of a real device, and would have encouraged police to stay on the scene and continue their search. The retired RUC Superintendent stated that the IRA could also use the code word to reiterate the warning and direct police back to the scene of a bomb if the device failed to go off as planned. In these cases, the IRA actually wanted army ATOs to find the device and dispose of it, because of the risk the bomb posed to civilians. The code word offered a way of linking the follow-up phone call to the initial warning, giving the police reason to re-canvass the scene.

However, the RUC Special Branch veterans suggested that the primary purpose of code words was diplomatic. Throughout the conflict, IRA leaders communicated with the British government to discuss the possibility of ceasefires and peace negotiations. Unable to meet with government representatives directly, the IRA leadership would send an envoy to communicate its messages. Although initial contacts between the envoy and British representatives might be made face-to-face through a mutually trusted broker, that broker and envoy might not be available later. The code word provided a way of verifying the permission of a new envoy to represent the Army Council in discussions with the government. According to the high-level Special Branch veteran, “if you have your initial point of contact ... but that person is no longer going to be able to do it, [the Army Council] would give you the password that legitimizes engagement with the next

[envoy]. That password then becomes the legitimate vehicle for the next [envoy].”

The IRA used a similar scheme for making official statements to journalists. The IRA approached journalists face-to-face or through some personal connection, as in the initial overture to the government, but subsequent statements might be given by a different person or by phone. According to veteran Belfast journalist Eamonn Mallie:

Somewhere along the way you will meet somebody or somebody will call you and they will literally say “From now on, the IRA will use the following code word,” so you know, and they know that you know. Then you will be the contact point [for statements].

Many of these statements would be claims of responsibility for attacks that the IRA had already carried out. Journalist #3 recalled receiving such statements by telephone “from somebody who was using a code word to authenticate that the person who was making that call was genuine.” These responsibility claims gave credibility to IRA promises later – to continue the violence, to increase the violence, or to reduce it – if the British government accepted IRA demands for policy concessions or peace negotiations. But responsibility claims can be faked. Because of its cell structure, IRA units could carry out attacks semi-autonomously. Renegade factions could also split off from the IRA. In the short term, it might be in the Army Council’s interest to claim responsibility for things it had not actually authorized, to seem more cohesive or powerful than it was in reality. But it was in the IRA’s long-term interest to demonstrate the extent of its control over the violence. Code words were a means to do this.

Placing a code word in the warning messages *ex ante* demonstrated that the IRA had given full authorization for those actions in advance. This demonstrated the scope of the IRA leadership’s control. The RUC Special Branch intelligence expert explained:

[The code word] was a sign to them [the British government] of how much in control the Provisional leadership were of their organization. So I’m sitting talking to you and you say, ... “You’ve got all these guys out there. All these guns, all these bombs, all these renegades... wanting to kill people – How can you control those?” I’ll tell you

how I control them. “Every time there’s an act, I’ll attach the word to it, and then you’ll know. . . . And they do as I say. And I’ll tell you better than that, it’s a tap. I can turn it on and I can turn it off.” It proved control over a very large terrorist organization.

By this account, the true value of code words lay in their diplomatic function. Only high levels of the IRA structure and UK security structure would have understood this. This accounts for the popular misunderstanding of code words among rank-and-file IRA members, intermediaries who received warnings, and most of the RUC personnel who responded to warnings.

Taken as a whole, the above discussion lends support to H10, that militants will be less likely to give hoax warnings if the frequency of non-militant pranks is already high. The IRA and ETA used codes, intermediaries and multiple warning calls to communicate their messages because they were concerned about the credibility of their warnings. Prank warnings posed a problem for these groups, because the pranks might tip the government’s cost/benefit calculation in favor of not responding when the IRA and ETA tried to warn them about a real bomb. The IRA and ETA had a fundamental interest in facilitating a police response, so they took steps to reduce the effective rate of pranks (ω). The IRA and ETA also restrained their own use of hoax tactics, giving the government further reason to believe any warning it received. IRA interviewees stressed that although their group did use hoax tactics, they “weren’t used on a regular basis” (John O’Hagan’s words). ETA refrained from hoaxes entirely to ensure “that the credibility of the organization was complete” (Antton Etxebeste’s words). By cultivating credibility, ETA sought to deny police any excuse for ignoring a warning.

These empirical observations support my signaling model’s prediction that high levels of noise will induce separating signals by the two types of militants. Other studies of noisy signaling have made similar predictions (Haan and Sloof 2011) but their hypotheses are not borne out in experiments. My study of the IRA and ETA shows that noise may induce separating signals in conflict settings, despite the strong temptation for militant groups to give false warnings when the level of background noise is low.

7 Extensions to State Behavior

Pre-attack warnings are not unique to intrastate conflict or international terrorism. States engage in warning behavior as well, and often on a grand scale. In this section I extend my discussion to the warning behavior of state actors. I reinterpret my theory somewhat, seeking to explain the behavior of a *state* carrying out bombing attacks on another state or a non-state entity. I examine three cases in particular: Chinese shelling of the Taiwan Straits islands from 1958-1979, the United States' atomic bombing of Japan in 1945, and Israel's bomb and artillery operations on Hamas-controlled Gaza. After summarizing the historical background and political incentives in each case, I assess how well my theory can explain the observed behavior of the attacking state (warning or not warning). I then give additional predictions as to when we should see warning or non-warning behavior by other states, based on the three cases analyzed here.

7.1 China's Alternate-Day Shelling of Quemoy, 1958-1979

The first case I consider is China's shelling of the Taiwan Straits island of Quemoy from 1958 through 1979. This incident took place in the broader context of China's militarized dispute with Taiwan, the Western-leaning island state it regards as a renegade province. Chinese and Taiwanese forces have clashed repeatedly over Quemoy, situated just two kilometers off of the mainland and more than two hundred kilometers from Taiwan's shores. China briefly attacked Taiwanese positions on Quemoy in 1954, and in August 1958, it launched a second artillery bombardment.

Analysts disagree as to why China initiated this crisis over Quemoy. The obvious possibility is that China intended to take the island, given its proximity to the mainland. Taiwan had placed fortifications and artillery on Quemoy, presenting a direct threat to the mainland, but Taiwan also faced difficulty in resupplying its garrison. If China could blockade the island, it could potentially starve the Taiwanese garrison out. However, Christensen (1996) notes that the People's Liberation Army (PLA) and Chinese navy were never prepared to land on Quemoy in force. The crisis was nonetheless useful to Chinese premier Mao Zedong, who invoked militarized patriotism to rally domestic support for his Great Leap Forward. Christensen contends that Taiwan and the US

were “useful adversaries” to Mao, at a moment of great political risk. Taking a slightly different view, Pollack (1996: 237-40) raises the possibility that Mao’s broader plan was to crowd the United States out of Chinese-Taiwanese affairs. The crisis was initiated by China, and could be stopped by China at a time of its choosing. A sudden, magnanimous resolution would demonstrate America’s irrelevance to the Chinese-Taiwanese dispute. If, as China contended, the dispute was an internal affair to be settled by the “one China,” starting and ending a crisis created facts to support the Chinese view.

China’s incentives for warning or non-warning behavior in this case were as follows. If, as Christensen argues, Mao instigated the 1958 crisis to unify domestic support for his regime, the benefit of the shelling (formally the D_1 and D_2 parameters) was not in the physical damage caused, but in the consolidation of Chinese patriotism. Granting Pollack (1996)’s interpretation, that Mao started the crisis to crowd the United States out of the China-Taiwan dispute, the benefit of shelling was also symbolic. The purpose was to create a crisis that China could stop without US help. There was little difference between D_1 and D_2 , because the point was to have fired the shells in the first place – not to have destroyed anything in particular. G was relatively low in this case, because the only “response” possible was for people on Quemoy to move to protective shelters they had already built. As such, the difference between the payoff for warning $D_2 + G$ and the payoff for not warning $D_1 - X$ was driven by the X parameter, political costs for harming civilians.

Granting Christensen’s view that Mao wanted to consolidate support for the Great Leap Forward, killing large numbers of people on Quemoy (or achieving a decisive victory there) would have been counterproductive. Mao’s view was that people on Quemoy were Chinese citizens – albeit misguided ones who had sided with American imperialism. Killing Chinese citizens (or slowly starving them via a prolonged siege of the island) was a way to sabotage national unity, not to promote it. Therefore, the cost of no-warning attacks (X) was high. The interpretation is similar, granting Pollack’s argument that the purpose of the crisis was to crowd America out of Chinese affairs. Killing or slowly starving large numbers of people on Quemoy was likely to trigger Amer-

ica's defensive alliance obligations to Taiwan. The US would move in to escort Taiwanese relief convoys to the beleaguered Quemoy garrison. Further no-warning attacks would then risk hitting US escort ships, triggering direct America reprisals against the Chinese mainland. Because no-warning attacks and civilian casualties created conditions for US military involvement, China's political cost for no-warning attacks (*X*) was high.

Based on either Christensen's or Pollack's interpretation of this case, my theory predicts that the attacking state should give pre-attack warnings. This is precisely what China did – although not until it had made its initial point by establishing an artillery “blockade” of Quemoy. From the 23rd through the 29th of August 1958, PLA artillery fired roughly 125,000 shells at Quemoy and the surrounding waters. The bombardment was so intense that it prevented the Taiwanese from resupplying their garrison. The United States, bound by a 1954 treaty to defend its ally, moved naval nuclear assets into the Taiwan straits. The US also initiated diplomatic meetings to convince China to end the shelling. After forty-four days, with the Quemoy garrison beginning to suffer the effects of deprivation, China surprised the Americans and Taiwanese by announcing a unilateral ceasefire (Christensen 1996: 194-6).

China's public announcement on October 6th declared a one week ceasefire, which was renewed on October 13, provided that the US Navy “not conduct escort operations” for Taiwanese ships (Halperin 1966: 469-70). The Chinese communiqué cited humanitarian reasons for the ceasefire, including a desire to allow both food *and* military supplies to reach the Taiwanese garrison. An American ship triggered a brief interruption of the ceasefire on October 20th, by straying into Chinese territorial waters, but China renewed the ceasefire on October 25th (Halperin 1966: 471-2). The text of the October 25 communiqué was addressed from the Chinese defense minister to the misguided “compatriots” on the islands:

I have already ordered our troops at the Fukien front not to shell the airfield in Quemoy and the wharf, beach and ships at Liaolo Bay on even days of the calendar, so that the compatriots, both military and civilian, on the big and small islands ... may all get sufficient supplies, including food, vegetables, edible oils, fuels and military

equipment, to facilitate your entrenchment for a long time to come. If you are short of anything, just say so and we will give it to you. ... Your ships and aircraft should not come on odd days. We will not necessarily conduct shelling on odd days. But you should refrain from coming, to avoid possible losses. In this way, half of each month will be free for transportation, and supplies would not be lacking [sic]. (Quoted in Halperin 1966, p. 475-7)

True to their word, the People's Liberation Army refrained from shelling the airfield, wharf, beach and ships on even days. Soon they ceased all firing on even days. According to RAND Corporation observers, "the on-again, off-again pattern settled down to a regular minuet, with the Chinese Communists firing no shells at all on the even days and firing regularly and in roughly the same amounts on the odd days" (Halperin 1966: 476). The shells the PLA did fire were filled with propaganda leaflets rather than high explosives. From late 1958 until the normalization of US-China relations in 1979, Chinese and Taiwanese artillery exchanged leaflet shells on odd days of the month, at regular intervals, so that anyone wanting to avoid injury needed only to stay indoors during shelling hours (Wong and Yang 2011).

Again recalling Christensen's and Pollack's interpretations of Mao's goals – cultivating "useful adversaries" and crowding the US out of Chinese-Taiwanese affairs – my theory explains China's pre-attack warnings well. The slaughter or starvation of Taiwanese "compatriots" on Quemoy would have sown division in Chinese politics at precisely the moment when Mao sought national unity. China's partial lifting of the artillery blockade, and the Chinese offer to resupply Taiwan's hostile garrison, helped to sustain China's adversaries, whom the Chinese continued to shell (on a regular schedule and only with propaganda bombs) throughout the Great Leap Forward. The alternate-day shelling also showed that China and Taiwan, despite their ongoing dispute, had the ability to resolve their differences³³ without US intervention or butchery. No-warning attacks would have spoiled the diplomatic "minuet," which China and Taiwan maintained for 21 years.

³³The bombardment did further butchery in one important way: The large amount of steel recovered from China's exploded propaganda shells provides Quemoy's knifsmiths with an abundant supply of raw material. The Kinmen (Quemoy) Knife company makes up to sixty blades from each shell, selling them at premium prices (Wong and Yang 2011).

Based on this analysis of Chinese behavior, we should expect to see warning behavior in other cases where states use violence primarily for diplomatic signaling. When the purpose of a shot or an explosion is not to destroy, but to communicate, $D_1 - D_2$ is quite low, and even a moderate political cost for excessive killing (X) may persuade a state to give warning before shooting. Axelrod (1984) presents an intriguing study of mutual dereliction in the trenches of the First World War, which resembles the Taiwan Straits case to a degree. Individual units on the German and British sides, convinced of the futility of trench warfare, began intentionally to fire shots off-target. By missing their targets obviously and intentionally, each side communicated its intent *not* to harm the other if the other reciprocated this restraint. Warnings – whether by public announcement or by establishing a predictable pattern – are a way of maintaining restraint and even civility in an existing conflict situation. States are likely to give warnings when they see high value in the “minuet” of diplomacy and symbolic violence, with a correspondingly high cost for no-warning attacks that spoil the rhythm.

7.2 US Leaflet Dropping before the Atomic Bombing of Japan, 1945

The second extension of my theory to state behavior concerns the United States’ atomic bombing of Japan in 1945, at the end of the Second World War. Prior to dropping atomic bombs on Hiroshima and Nagasaki (August 6th and 9th, respectively), the United States’ Office of War Information (OWI) dropped thousands of leaflets on Japanese cities. These leaflets contained a warning message and are sometimes interpreted as evidence that the US tried to warn Japanese civilians of the atomic bombings. However, a close analysis shows that these leaflets were not intended as a good-faith warning about the atomic bomb, for reasons explained by my theory.

To put the US leaflets in context, by the summer of 1945 the Japanese military had lost most of its capability for self-defense and was facing a looming invasion of the Japanese “home islands.” Japan’s navy was stripped of its capital ships; Japanese garrisons had been dislodged from smaller islands such as Okinawa; and the Japanese air force was a shadow of its former self – incapable of stopping waves of US bombers that overflew Japanese cities. These American planes dropped

thousands of tons of high explosives and incendiary bombs, leveling military and industrial targets and incinerating residential housing. The civilian toll of these attacks was horrendous. The March 9 firebombing of Tokyo alone left 100,000 dead and roughly a million homeless (Williams 2007). Three main allied powers – America, Britain, and the Soviet Union – were planning an even larger operation to invade the main islands of Honshu, Kyushu, and Hokkaido from all sides. Despite the destruction of population centers and the inevitability of an allied invasion, Japan’s military leaders planned to resist the allies to the death.

The incentive structure facing US President Harry Truman, in deciding whether or not to give a warning of the atomic bombings, was as follows. The political cost for indiscriminate attacks on civilians (X) was low. Despite the massive civilian death toll that could be expected from atomic attacks on Japanese cities, the US had already carried out similarly destructive attacks, with no warning, with virtually no domestic political outcry. Bundy (1990: 64) notes that American civilian and military leaders expressed opposition to “obliteration raids” during the early years of World War II. However, the American position had shifted by the mid-1940’s, when it became clear that “precision” attacks on military and industrial targets were difficult and the daylight raids required for precision bombing were incredibly costly in aircraft lost. As early as 1943, American air strategy was transitioning toward “saturation bombing,” including incendiary attacks on population centers. US President Franklin Delano Roosevelt, previously an opponent of saturation bombing, now argued in favor of the tactic because it was capable of “shortening the war, in the opinion of an overwhelming percentage of military authorities” (Bundy 1990: 65). The American public agreed. Following a protest by British pacifists against the obliteration of German cities, *The New York Times* reported “an unusually heavy mail ... The letters run in a proportion of 50 to 1 opposing this protest” (Beal 1944). By 1945, when attention turned to Japan, the public and press were clamoring for the destruction of Japanese cities. Reporting on the March 9th firebombing of Tokyo, *The New York Times* neglected entirely to discuss the issue of casualties. However, the *Times* expressed hope that “our air aces would soon be weaving the Berlin pattern in the Tokyo sky” – ostensibly to finish the city off (Rae 1945).

Given the political climate in America, President Truman's political cost (X) for killing Japanese civilians was close to zero. The operational cost of a giving a warning, however would have been high. Unlike incendiary raids, which could be carried out at night from low altitudes that minimized bombers' vulnerability, the atomic bombing missions required a bomber and a squadron of spotter planes to overfly the target at high altitude during daylight hours. Bundy (1990: 75-6) argues that "to the degree that they believed the warning" of an atomic bombing, Japanese air defense forces would "take extraordinary measures to attack any aircraft that might be its carrier. ... To add any such risk ... to a mission already unusual in its complexity and danger would have seemed quixotic to the military professionals." In broader strategic terms, it also appeared quixotic to General Leslie R. Groves, director of the Manhattan Project. Writing about the atomic bombings years later, Groves remarked: "It was always difficult for me to understand how anyone could ignore the importance of the effect on the Japanese people and their government of the overwhelming surprise of the bomb" (Groves 1962: 266). The full value of the atomic bombings (D_1) was measured not only in damage, which could easily be replicated with incendiary raids, but also in the novelty and terror of atomic weapons. Given the importance of a mission that relied on this psychological mechanism, the likelihood that giving warning might spoil the attack, and the fact that the United States possessed only two atomic bombs, the operational cost of giving warning ($D_1 - D_2$) was very high.

The value of response costs (G – here understood as the cost to the Japanese government of evacuating Hiroshima and Nagasaki) would have been small compared to the potential benefit of a surprise attack (D_1). The United States' Office of War Information (OWI) and the Air Force had already dropped in excess of fifty million leaflets over Japan in the preceding months, including leaflets foreshadowing the firebombings of Tokyo and other cities. A history published by the US Central Intelligence Agency states that Japanese civilians "trusted the accuracy of the leaflets and many residents of the targeted cities prepared immediately to leave their homes" (Williams 2007). And yet, previous firebombings and evacuations had failed to induce the type of large-scale social

and economic dislocation that might have induced a Japanese government surrender. Because the atomic bombs offered a real chance to end the war, the comparison of payoffs for warning ($D_2 + G$) and not warning ($D_1 - X$) clearly favored *not* warning.

This is the policy President Truman and his advisors chose. In the months prior to the atomic bombings, Truman convened an Interim Committee of scientific and military advisors to determine the best way to use the atomic bomb. Meeting on May 31, 1945, the Committee considered various options. These included a demonstration explosion on an unpopulated area or a specific advance warning about the nature of the device, to be communicated along with a set of surrender terms that Japan would have to accept to avoid destruction. The Interim Committee reached a “general agreement, that we could not give the Japanese any warning” (Sherwin 1987: 32). At a June 18th meeting, Truman’s Assistant Secretary of War, John J. McCloy, urged the president to ignore the Committee’s recommendation, but McCloy was overruled. Bundy (1990: 74) writes that McCloy and Secretary of War Henry S. Stimson were authorized to draft “an effective message of hope and threat to the Japanese” for inclusion with surrender terms. The terms were to be negotiated by the US, Britain, and Soviet Union at a July 26th meeting in Potsdam Germany. But “specific advance warning of the bomb was not part of what they [McCloy and Stimson] were free to work with.” The plan stayed consistent through the August 6th Hiroshima attack:

It was agreed in early June that the bomb would be used when ready. It was agreed later that month that before such use the Japanese should receive a generally phrased last-minute warning of total destruction unless they should surrender. It was expected that such a warning would probably be rejected. ... The last chance warning was given July 26; it was dismissed by the Japanese; two bombs were dropped (Bundy 1990: 81).

The “generally phrased last-minute warning” is worth discussing because it illustrates the difference between useful and useless warnings by state actors. In previous sections, I have discussed both types, as given by non-state actors. Recall, for instance, ETA’s highly specific warnings regarding commercial attacks. These messages are very different from ETA’s “warnings” for *Guardia Civil* families to evacuate the *casas cuarteles*. The former are useful to the recipient; the latter are useless, except perhaps as political cover for bloodshed the attacker fully expects to cause. The

United States' last-minute warnings to Japanese civilians were of the useless variety.

At the July 26th summit in Potsdam Germany, American, British, and Soviet leaders agreed on a diplomatic communiqué to be issued to Japan, offering the allies' terms of surrender (full disarmament and abdication of governing authority to an allied occupation government). The declaration also warned of "prompt and utter destruction" if Japan failed to accept the surrender terms. The allies transmitted the message to the Japanese government and distributed it to the civilian population by air-dropping three million paper leaflets over Japanese cities (Williams 2007). When Japan's military leaders announced their rejection of the offer, the Office of War Information began printing a new set of leaflets, warning the Japanese public of strategic bombing raids on their cities. The so-called "LeMay leaflets," named after Strategic Air Command chief General Curtis LeMay, were dropped over thirty-five Japanese cities on August 1st. Hiroshima and Nagasaki were among the thirty-five cities to receive the leaflet, although the text made no mention of the atomic bomb or a specific threat to Hiroshima or Nagasaki.³⁴ To the Japanese public, the leaflets seemed to promise more firebombings, like the attacks on Tokyo. The August 1st leaflet read:

Read this carefully as it may save your life or the life of a relative or friend. In the next few days, some or all of the cities named on the reverse side will be destroyed by American bombs. These cities contain military installations and workshops or factories which produce military goods. We are determined to destroy all of the tools of the military clique which they are using to prolong this useless war. But, unfortunately, bombs have no eyes. So, in accordance with America's humanitarian policies, the American Air Force, which does not wish to injure innocent people, now gives you warning to evacuate the cities named and save your lives. America is not fighting the Japanese people but is fighting the military clique which has enslaved the Japanese people. The peace which America will bring will free the people from the oppression of the military clique and mean the emergence of a new and better Japan. You can restore peace by demanding new and good leaders who will end the war. We cannot promise that only these cities will be among those attacked but some or all of them will be, so heed this warning and evacuate these cities immediately. (Reproduced in Williams 2007.)

³⁴In fact, Hiroshima and Nagasaki were not the only cities on the list of atomic targets. Each raid was planned with a primary and two secondary targets, in case weather made it impossible to drop the bomb on the primary target. Nagasaki was actually a secondary target. Regardless, the leaflets warned far more cities than were on the atomic targeting list.

The August 1st leaflets brought the total number of OWI leaflets dropped over Japan to sixty-three million, none of them mentioning atomic weapons. If the August 1st leaflets induced any new evacuations, the numbers were too few to avoid humanitarian catastrophe at Hiroshima. Of the city's population of 350,000, between 90,000 and 166,000 died as a result of the August 6th blast (RERF 2007).

After the bombing, US President Harry S. Truman issued a new communiqué to the Japanese public, specifically referencing "the awful fact" of Hiroshima's obliteration by "the most destructive explosive ever devised." Truman's message promised further bombings and encouraged Japanese civilians to "evacuate your cities" and "petition the Emperor to end the war" (Truman 1945). The message did *not* mention Nagasaki or any other city as America's next target. Even if it had, the leaflets arrived too late to serve as a warning to city residents. Although Truman and the OWI drafted the message on August 6th, the text went through at least one revision to include the August 9th news that the Soviet Union had declared war on Japan. Five million leaflets bearing the final version of the text were dropped throughout Japan on August 9th, the day of the Nagasaki bombing. Between 60,000 and 80,000 of the city's 270,000 inhabitants were killed (Williams 2007; RERF 2007).

If the various OWI leaflets were meant to contain no useful warning about the atomic bomb, why did the United States drop them? The first explanation is organizational: the decision to drop the atomic bomb, as well as the decision on how to frame the action politically, were the work of committees. These committees contained key players (John J. McCloy, for instance) who felt a moral obligation to convey a warning, however vague, to the Japanese. The leaflets contained the most detailed warning (which is to say a very vague, essentially useless warning) doves like McCloy were able to get through the committee process. Second, the leaflets were intended to put pressure on Japan's civilian government, particularly Emperor Hirohito, to surrender and end the public's suffering. As Pape (1996: 109) notes, "Japan was an authoritarian state governed by an oligarchy," but public opinion was "one factor to be considered among others by elites." By

instructing civilians to “petition the Emperor to end the war,” the OWI leaflets leveraged popular opinion to whatever extent possible, given Japan’s governing institutions.

To summarize, the operational cost of warning about the atomic bombs ($D_1 - D_2$) was high. A warning risked spoiling a mission that was expected to end the war in the Pacific. The political cost of failing to warn (X) was relatively low, given Americans’ willingness to tolerate strategic bombing in general. (The atomic bombings, if they compelled Japanese surrender, would also save Americans the ordeal of conquering Japan.) The issue of response costs, G , understood as the cost of evacuating Hiroshima and Nagasaki, was also trivial compared to the destructive and psychological power of a surprise attack.

Overall, the US leaflet dropping in 1945 is consistent with my theoretical expectations in cases involving a non-state attacker. The attacker is unlikely to give warning when the operational cost of warnings is high, the expected political cost of non-warning attacks is low, and little benefit is expected from the imposition of response costs on the target. Applying that logic to states, my theory predicts that a country in the United States’ position will give no warning (or no actionable warning) before carrying out the attack. That is precisely what happened at Hiroshima and Nagasaki. On the other hand, the same theoretical framework would predict warnings if the operational cost of warnings is exceedingly low, or the political cost of warning is very high. This is structure of state incentives in the third example I discuss, and we see more meaningful warnings by the state in that case.

7.3 Israeli Pre-Attack Warnings During Operation Cast Lead and Operation Protective Edge

The third example I discuss is the case of Israel in its bomb and artillery attacks on Gaza during “Operation Cast Lead” (2008-2009) and “Operation Protective Edge” (2014). In both of these operations, Israeli forces employed air strikes as the primary means of destroying alleged Hamas weapons, military personnel, and leadership targets located in civilian urban areas. The roots of

these conflicts lay in the breakdown of an informal ceasefire brokered by the Egyptian government in June 2008. Despite the ceasefire, Israel Defense Forces (IDF) and Palestinian militants engaged in periodic tit-for-tat violence throughout the summer and fall of 2008. Israel also maintained an economic and military blockade of Gaza, citing concerns that Hamas would use civilian materials to build weapons that could be fired across the border at Israelis (UNHCR 2009: 59, 62-71). Tensions increased until Israel launched Operation Cast Lead on December 27th.

Israel accused Hamas of deliberately hiding its most effective weapons – artillery rockets – within civilian structures. The Israel Defense Forces (IDF) announced at the beginning of Operation Cast Lead that they had no intention of avoiding civilian structures. The results were predictably bloody. Israeli estimates place the number of Palestinian fatalities in Operation Cast Lead at 1,166. Palestinian and Western human rights organizations estimate the total at roughly 1,400, including as many as 1,172 civilians (UNHCR 2009: 89-90). The UN's estimates after Operation Protective Edge were 2,192 Gazans killed, including 1,523 civilians (UNOCHA 2014).

Israel's political situation, going into these conflicts, was precarious. Operations against Hamas are not controversial within Israel, where 79 percent of the Jewish population "strongly supported" the 2008-2009 war and 90 percent felt that the 2014 war was morally justified (Ben-Meir 2009; Hermann 2014). However, Israel faces strong criticism internationally for its policies toward Palestinians, including the economic blockade of Gaza, the construction of Jewish settlements in the West Bank, and its use of what the UN calls "excessive or lethal force during demonstrations" by Palestinians (UNHCR 2009: 7, 52).³⁵ From an Israeli perspective, these critiques are especially worrisome when they influence public opinion in the United States, the country's most reliable supporter in a largely hostile international environment. A 2007 BBC poll taken in twenty-seven nations found that only the American, Nigerian, and Kenyan publics held a favorable view of Israel. As of 2013, only the American public held a favorable view of Israel (BBC 2007, 2013b). The US is Israel's international advocate in venues such as the UN Security Council. It is also Israel's

³⁵International organizations are also critical of Hamas attacks on Israeli border cities (UNHCR 2009).

main benefactor, having supplied \$ 56 billion in military aid to the country from 1949 through 2008 (Sharp 2015: 29).

Going into the 2008-2009 conflict, it was clear that Israel's political and military fate depended in large part on maintaining American support, and this was far from assured. Although a high percentage of Americans (typically between 55 and 75 percent) view Israel favorably, polls on foreign aid typically find that between 30 and 40 percent of Americans believe the US gives "too much" to Israel. Between 40 and 50 percent believe the amount of aid is "about right" and roughly 10 percent believe the amount of aid is "too little" (Newport 2006; Saad 2015). The inauguration of President Barack Obama in January 2009 introduced new political complications, with the Obama administration taking a critical line (unusually critical, for an American president) toward Israeli policies such as the construction of settlements in the West Bank. Israeli Prime Minister Benjamin Netanyahu pushed back with unusually strong rhetoric of his own (Oren 2015).

Israeli bombing operations in Gaza risked souring relations with Americans, unless Israel could justify its actions. The weapons used by Israel in Gaza were American after all, and as we saw in the IRA case, Americans care (to some degree) whether their weapons are used indiscriminately. Given the importance of American support and the risk of losing it, Israel's political cost for indiscriminate violence (X) was high. At the same time, the operational cost of giving warnings ($D_1 - D_2$) was very low. A 2009 UN report on Operation Cast Lead argued that "it is ... difficult to imagine more propitious circumstances" for a country to give warnings, given Israel's "complete domination of Gaza's airspace," "the means to use the landlines and mobile telephone networks" to communicate warnings, and Israel's "intimate knowledge and sophisticated up-to-date intelligence" on Hamas targets (UNHCR 2009: 128). With the ability to overfly Gaza at will, Israel could attack Hamas targets at a time and in a manner of its choosing, selecting the means and timing of each warning to avoid compromising its legitimate actions against Hamas military targets.³⁶ Human rights organizations with a cynical view of Israeli motives argue that the IDF uses warnings

³⁶Israel typically chose, in keeping with my model's logic and observed behavior in the IRA and ETA cases, not to give warnings before assassination-type attacks on Hamas leaders (Erlanger and Akram 2014).

as a means to “spread confusion and terror” by inducing the “forcible displacement” of civilians (FIDH 2015: 15). Those who interpret Israel’s military goal as collective punishment (Amnesty International 2014) may interpret population dislocations as a type of response cost (G) imposed by the Israeli warnings. Regardless of Israel’s motives and the value of G , the high political cost for indiscriminate killing and the low operation a cost of warning satisfied the condition for warning in this case: $X + G > D_1 - D_2$.

The Israeli practice of warning goes back at least as far as 2005, when the Israel Defense Forces exchanged air strikes and artillery fire with Palestinian militants in Gaza. Israeli warplanes dropped leaflets, bearing a message that was part warning, part threat, and part self-exculpation (Cook 2010: 228, bullets original):

- The terrorist actions originating from your areas are forcing the Israel Defense Forces to respond harshly to those who are subjecting the citizens of the State of Israel to danger.
- We call on the Palestinian Authority to shoulder its responsibility to prevent these criminal acts.
- We warn you of the danger of remaining in the areas which are being used to launch terrorist actions and we advise you to leave your homes.
- We are not responsible for the consequences if you ignore our warning.

The Israeli government’s contention is that warnings constitute due effort to reduce civilian casualties when carrying out military operations in populated areas. The UN and human rights organizations note that many IDF bombings took place with no warning (Amnesty International 2014). But warnings, when given, have the potential to reduce civilian casualties and bring Israeli military operations into compliance with the Geneva Conventions. States are obliged to give warnings under Article 57 (c) of Additional Protocol I, which states that “effective advance warning shall be given of attacks which may affect the civilian population” (ICRC 1977).³⁷ Israel has not endorsed Additional Protocol I, citing provisions it claims legitimize terrorist violence, but it does claim to adhere to relevant international laws governing the treatment of civilians (Lapidot and Rozenzweig 2011).

³⁷This protocol was added in 1949, *after* the effects of WWII strategic bombing were widely known.

Beyond reducing casualties (certainly a desirable end, from an Israeli public relations perspective) the IDF's pre-attack warnings facilitate a narrative that focuses on Israel's effort to *minimize* harm. The same narrative focuses attention on Hamas's indiscriminate rocket fire. As Prime Minister Benjamin Netanyahu put it: "Israel does not commit war crimes, but Hamas commits war crimes" (Hezki 2015). Israel gave pre-attack warnings prior to air and artillery strikes during Operation Cast Lead, air-dropping leaflets, placing pre-recorded phone calls to individuals whose homes were about to be targeted, and "commandeering" frequencies used by Gazan radio and TV stations to issue IDF warnings in place of the stations' regular programs (Israeli Ministry of Foreign Affairs 2008). Israel's warnings could be vague, however, recalling the non-specific and unhelpful American leaflets dropped on Japan in 1945:

To the residents of the Gaza Strip The IDF will act against any movements and elements conducting terrorist activities against the residents of the State of Israel. The IDF will hit and destroy any building or site containing ammunition and weapons. As of the publication of this announcement, anyone having ammunition and/or weapons in his home is risking his life and must leave the place for the safety of his own life and that of his family. You have been warned.

A second example warned "all residents of the area ... to leave your homes immediately and move to the city centers" where, ostensibly, the IDF would not conduct bombing operations. A United Nations report on the 2008-2009 Gaza war criticized this type of warning for "lacking ... specificity and clarity: people could not be certain that the warnings were directed at them in particular, since they were being issued as far as they could tell to almost everyone, and they could not tell when they should leave since there was rarely an indication of when attacks would take place." Moreover, because the IDF had previously conducted airstrikes in city centers, "people could not reasonably be expected to flee to what appeared to be even less safe places on the basis of such non-specific warnings" (UNHCR 2009: 132).

Not all of the IDF's messages were vague, however. The 2009 UN report cites the following example, given to residents of a neighborhood in Rafah, as potentially compliant with the Geneva Conventions:

Because your houses are used by Hamas for military equipment smuggling and storing, the Israeli Defense Forces (IDF) will attack the areas between Sea Street and till the Egyptian border. . . All the Residents of the following neighbourhoods: Block O – al-Barazil neighbourhood – al-Shu’ara’- Keshta- al-Salam neighbourhood should evacuate their houses till beyond Sea Street. The evacuation enters into force from now till tomorrow at 8 a.m. (UNHCR 2009: 130).

As my study of non-state warning behavior shows, warnings must be both specific *and* credible if they are to reduce civilian casualties. During the 2009 conflict, Palestinian human rights organizations complained that dozens of Gaza families were receiving warnings about attacks – and hundreds more were receiving warnings about attacks that never took place. Some of these cases may have resulted from the IDF calling off airstrikes when it realized that civilians were too close to the attack’s intended target. Nonetheless, there was a discrepancy between Israeli airstrikes threatened and those actually carried out. Palestinian NGOs and Hamas condemned the IDF’s warnings as a tactic to terrorize Gazan civilians and induce mass population dislocations as a form of collective punishment (FIDH 2015).³⁸ Just as a high percentage of false warnings can make the government in my formal model unresponsive, many Palestinian civilians ignored warning messages they assumed to be false. The UN’s 2009 report cites cases where previous false warnings led Gazans to ignore subsequent warnings, with tragic consequences when those warnings were followed by actual bombings (UNHCR 2009: 132).

Aware of this criticism, the IDF also employs a tactic dubbed “roof knocking,” the dropping of small, supposedly harmless bombs on the roofs of buildings before the buildings are attacked with conventional high explosives. The IDF touts roof knocking as a credible means of conveying a warning to building residents, particularly in cases where leaflets and telephone warnings have failed. The UN and human rights groups raise the obvious objection that small bombs have the ability to kill (and in some cases have killed) residents of buildings on which they are dropped (UNHCR 2009: 132). This problem is compounded by the fact that the roof knocking must be

³⁸To avenge the alleged terror of Israeli warnings, Hamas has made threatening phone calls to Israelis in border towns, promising that “Palestinian resistance missiles” are on their way “and your government won’t be able to protect you” (Balousha and O’Loughlin 2009). These messages are unambiguously intended to terrify. Even if Hamas intended to give real warnings, its rockets are not accurate enough to land in the areas that are warned.

done far enough in advance to allow residents to leave a building, but not so far in advance that people assume it to be a false warning and return to the building. There is no standard length of time between the roof knocking and the dropping of the second, high explosive bomb. In some cases, building residents have been given as little as one minute's time to flee (BBC 2014).

Despite questions about how many civilian casualties Israel's warnings actually prevent, the warnings serve as a rhetorical basis for defending Israel's actions in Gaza. The 2005 IDF leaflet makes Israel's point: "We are not responsible for the consequences if you ignore our warning." By implication, those who perish in Israeli attacks do so because they ignore Israeli warnings, because Hamas persuades them to stay and act as human shields for military equipment, or because the stay-behinds are militants themselves.³⁹ The UN disputes Israel's "inference," arguing: "The fact that a warning was issued does not ... relieve a commander or his subordinates from taking all other feasible measures to distinguish between civilians and combatants" (UNHCR 2009: 129-130).

By the beginning of Operation Protective Edge in 2014, Americans were growing skeptical of Israeli actions as well. President Obama's spokesman, Josh Earnest, pronounced Israel's shelling of a UN school "disgraceful;" Secretary of State John Kerry remarked that Israeli airstrikes in Gaza were far from "pinpoint;" and President Obama stated that, given US support for Israel, civilian deaths in Operation Protective Edge "have to weigh on our conscience" (McGreal 2014). Evangelical Christian groups, traditionally very supportive of Israel, reportedly worried that the Jewish state was "losing its grip" on younger evangelicals, who were increasingly "open to the Palestinian side of the conflict" (Guttman and Forward 2014). Israel's support also slipped among American Jews. Of those between the ages of 18 and 29, just 21 percent found Hamas primarily responsible for the violence in Gaza, compared to 29 percent who believed Israel held the greatest responsibility (Bell 2014).

³⁹The IDF also claims that it calls off air strikes if it believes civilians have ignored warnings and are acting as human shields (Israel Defense Forces 2014b). Anonymous IDF whistleblowers dispute this claim, arguing that once an area has been warned, the IDF operates under the assumption that any remaining people in the area are Hamas militants (Williams and Balmer 2015).

To combat this skepticism, the IDF and Israeli Ministry of Foreign Affairs tout Israeli pre-attack warning tactics on their outward-facing English language websites. The Ministry of Foreign Affairs website notes, for instance, that Israel dropped nearly a million leaflets during the first two weeks of Operation Cast Lead, made 30,000 phone calls, and broke into radio broadcasts at least three times to warn Gazans “of the IDF’s intent to attack, instructing residents to evacuate the areas where terrorists or terror infrastructure are to be found.” The website provides audio recordings of the radio messages and phone calls, as well as the text of leaflets (Ministry of Foreign Affairs 2008). The IDF posts the English-language translations of “the content of leaflets dispersed over the Gaza Strip” (IDF 2014a) along with a detailed webpage containing pictures of leaflets, gun camera video of aborted attacks, and audio of warning calls made to Gazans. The website is titled, “How is the IDF Minimizing Harm to Civilians in Gaza?” (IDF 2014b).

These websites provide evidence to support Israeli diplomats as they push back against unusually strong rebukes by White House officials. In late July, US Representatives Ileana Ros-Lehtinen (R-FL) and Ted Deutch (D-FL) introduced a resolution endorsing Operation Protective Edge, noting (in language very similar to IDF press releases) that the IDF “drops leaflets, makes announcements, places phone calls and sends text messages to the Palestinian people in Gaza warning them in advance that an attack is imminent, and goes to extraordinary lengths to target only terrorist actors.” The same resolution criticizes Hamas for “using civilian populations as human shields” and criticizes the United Nations for its “biased commission of inquiry into Israel’s Gaza operations” (Danziger and Meyer 2014). A similar Senate resolution, approved by unanimous consent, endorsed Israel’s “significant steps to protect civilians in Gaza, including dropping leaflets in Gaza neighborhoods in advance of Israeli military attacks, calling Palestinians on the phone urging them to evacuate certain areas before the military strikes targets, and issuing warnings to civilians in advance of firing on buildings” – all while “Hamas intentionally uses civilians as human shields” (Reid 2014). Israel’s defenders outside the government tout the IDF’s warnings as well. The Anti-Defamation League’s website notes that “Israel enacted procedures to warn civilians through leafleting, phone calls and other methods, that their neighborhoods and build-

ings were located in the vicinity of military operations ... In response to these warnings, Hamas advised Gaza residents to ignore 'Israeli propaganda' and stay in their homes" (ADL 2014). The Evangelical group Christian Friends of Israel gave another typical defense of Operation Protective Edge:

The IDF went to great lengths to warn the innocent people of Gaza ... Not only did the Air Force drop leaflets over communities warning them to leave the area being targeted to combat Hamas terrorists, but the army also sent phone calls and text messages as a warning. If that wasn't enough, the Air Force then dropped a nonexplosive missile on the roof of the building ... at a cost of \$25,000 USD per instance (McKenzie 2015: 10).

However effective or ineffective Israeli warnings are in reducing harm to Gazans, they are an important part of Israel's public relations strategy in the United States. Attacking Gazans with no warning would carry a high political cost (X) – risking the loss of public support by Israel's most important ally. Because of Israel's technological dominance in Gaza, the operational cost of warnings ($D_1 - D_2$) is low. Consistent with my theory's predictions, Israel gave pre-attack warnings in Operation Cast Lead and Operation Protective Edge. This outcome stands in contrast to the United States' behavior prior to the atomic bombings, when the cost of indiscriminate violence was low and the operational cost of warning was high.

We can draw two forward-looking predictions from these cases. First, warnings do not have to work (in the sense of sparing civilians) to be worthwhile politically. Critics raise questions about the effectiveness of Israeli warnings at reducing civilian casualties. Nonetheless, the fact that Israel did give warnings focuses the debate on *how well warnings work*, as opposed to the fundamental morality of bombing civilians. Giving warnings also reframes the fatality count, shifting the focus from an absolute number to the relative question of *how much worse it could have been* if the state had not given warnings. If a state, facing high political costs for indiscriminate attacks, can argue that warnings reduce casualties *to some degree*, it is worth trying the gambit.

Second, technological dominance and good intelligence decrease the operational cost of warning ($D_1 - D_2$). In the Israeli case, it was easy to give warnings without spoiling operations against

Hamas. With dominance of the skies and airwaves and an intelligence apparatus capable of tracking Hamas targets, Israel could attack at the most advantageous time, giving warnings (by leaflet, telephone, or roof-knock) that would not substantially reduce the chance of operational success. If an operation failed or had to be called off for any reason, Israel could re-attempt it later with little risk of losing aircraft and crews. The United States did not have the same advantages in 1945. Although American bombers could evade Japanese defenses by night, the atomic bombing missions required a formation of planes to overfly a major city at high altitude during the day. The formation carried one of only two atomic bombs in the entire world. Given the paramount importance of the mission and the likelihood of losing bombers (and precious bombs) if the Japanese learned of the missions in advance, the United States' operational cost of giving warnings was prohibitively high. In general, when the attacker has few technological advantages over the defender, the operational cost of warning is high. If the attacker has substantial technological and intelligence advantages, the operational cost is low and we are likely to see advance warnings by the attacking state.

8 Conclusion

In the preceding pages, I presented a theory and a set of empirical tests to explain the phenomenon of pre-attack warnings in conflicts between state and non-state actors. I also extended my theoretical framework to discuss warning behavior by states. I undertook this project for several reasons. First, warnings are puzzling at first glance: Why should someone carrying out a violent action give up the advantage of surprise and risk spoiling the attack? Further, why should the recipient of a warning believe it to be anything other than a prank or a hoax? If it seems illogical to give warnings, it seems even more illogical to believe them and act on them.

Warnings are puzzling, but they are also profound. The fact that attackers give up the advantage of surprise, and defenders act on the warning messages, shows that there is an underlying concordance of interests between the two. The group setting off a bomb is not solely interested in destruction. The receiver of the warning knows this as well. Militants can give false warnings to disrupt the economy and draw police into deadly ambushes, but they cannot act on these temptations too often. Militants and governments accommodate one another.

To understand how this interaction comes about, and why it comes about only in certain cases, I derived a formal model representing the militant group and the government. “Noise” plays an important role in this game as well. The model produces the following hypotheses:

- **H1:** *Militants are more likely to give warnings when they pay a high political cost for causing excessive civilian casualties.*
- **H2:** *Militants are more likely to give warnings when responding to warnings carries a high cost for the government.*
- **H3:** *Militants are more likely to give warnings when doing so does not greatly reduce the expected damage from an attack.*
- **H4:** *In cases where the government cannot mobilize at all, militants who face any cost for harming*

civilians will warn the government.

- **H5:** *Governments are more likely to mobilize when the damage saved will be high.*
- **H6:** *Governments are less likely to mobilize when doing so is costly.*
- **H7:** *Governments are more likely to mobilize when key audiences will impose political costs on the government for ignoring truthful warnings.*
- **H8:** *Militants are more likely to give false warnings if mobilizing is costly for the government.*
- **H9:** *Militants are less likely to give false warnings if doing so carries a high political cost.*
- **H10:** *Militants are less likely to give false warnings if there is already a high probability of prank warnings.*

8.1 Testing Hypotheses 1-4

Hypotheses 1-3 derive from the condition $D_1 - X \geq D_2 + G$ (or equivalently, $D_1 - D_2 \geq X + G$). For a warning to be individually rational, the political cost saved (X) and response cost inflicted on the government (G) must outweigh the expected reduction in damage relative to what a surprise attack would have caused ($D_1 - D_2$). The IRA interviews I present in Chapter 3 strongly support this portrayal of militants' costs and benefits. Consistent with H1, my IRA interviewees described non-warning attacks as "bad politics," at least when the target was civilian in nature. No-warning attacks killed indiscriminately, and this type of violence alienated three key support bases: the IRA's local supporters, on whom it depended for shelter and operational support; the Irish American diaspora, on whom the IRA depended for money and guns; and international political figures, whose support the IRA needed to secure a negotiated settlement with the British government. By giving warnings, the IRA avoided these political costs (X).

Warnings also imposed extra costs (G) on the British government by forcing it to shut down commercial zones and send police into potential ambushes. Consistent with H2, IRA members

described warnings as a “second opportunity” – to inflict costs beyond those of the explosion itself. The IRA’s behavior was also consistent with H3, related to the operational cost of warning. When the target was especially important and the likelihood of spoiling the attack especially high, the group gave no warning at all. The IRA’s 1984 assassination attempt on British Prime Minister Margaret Thatcher – the deliberate implosion of a civilian hotel, without warning – is the best example.

H4, another hypothesis derived from my model, states that militants with any political cost for harming civilians will give warnings in cases where the government cannot respond. Consistent with this hypothesis, police interviewees cited cases where IRA members hand-delivered bombs with such short fuses that only the bombers themselves could escape. The goal of such warnings, police argued, is not to allow “anyone else in the shop to get out into the street,” but to allow the IRA to “manage their own public relations” after the fact, by claiming that in every case, the group gave a warning. This interview evidence supports H4.

Chapter 3 provides further evidence in support of my theory. In my comparison of ETA and the Tamil Tigers, interview subjects described two very different political cost frameworks. As an underground group fighting a relatively non-abusive government (by world standards), ETA had to maintain a code of “revolutionary ethics.” When it failed to give warnings and civilians were killed, the Basque political mainstream moved to isolate the group. Tamils in Sri Lanka were not so eager to sanction the LTTE over its atrocities. The government had already done worse things to Tamils, and the LTTE was seen by Tamils as “the only force that was able to stand up to the government.” The LTTE also received state support from India, and it controlled territory where it could collect taxes and recruit troops. The costs of inhumanity are lower when a group does not depend entirely on voluntary support from local populations (and local populations themselves are radicalized).

This is a point that emerged in my second pair of case studies as well. Comparing the MRTA and

Sendero Luminoso, two Marxist rebel groups that fought the same government at the same time, it is clear that these groups had very different bases of support. *Sendero's* was in Peru's interior, where it had spent the better part of a decade organizing among *campesino* and *mestizo* people. In contrast, the MRTA was a militant outgrowth of mainstream labor politics in Lima. When *Sendero Luminoso* carried out massive no-warning car bombings in Lima, it had no effect on the group's main base of support in places like Ayacucho. Had the MRTA carried out such attacks in Lima, it would have been politically ruinous for them. *Sendero* was also building a parallel set of institutions, assuming that all non-Maoist institutions had to be destroyed. The group's Manichean logic and secure bases allowed it to contemplate shocking acts of violence against the revolution's enemies. As Abimael Guzmán put it, "we were willing to do anything to gain everything."

The case studies in Chapter 4 lend further support to H1. Groups who depend on local support in areas where they fight face higher political costs for indiscriminate killing. Groups also face higher costs when the government is not engaging in abuses and when the group's ideology requires it to reach out to broad sections of society. These factors increase the group's propensity to give warnings. At the beginning of Chapter 5, I used these insights to refine H1 and make it more easily testable with quantitative techniques. The refinements of H1 are:

- **H1a:** *Militants who depend heavily on local support are more likely to give warnings.*
- **H1b:** *Militants fighting a non-abusive government are more likely to give warnings.*
- **H1c:** *Militants with maximalist goals are less likely to give warnings.*
- **H1d:** *Religiously motivated militants are less likely to give warnings.*

Refining the hypotheses in this way allowed me to operationalize and measure the political costs for no-warning, indiscriminate attacks. I compiled a database of bombings and warnings, incorporating variables that measured militant autonomy, government political terror, maximalist goals, and religious motivations. My analysis of that database substantiated some of these refined hypotheses, and not others.

Most clearly, my analysis supported H1a. The variable *Autonomy*, indicating whether a militant group has state sponsorship, the control of territory, or both, showed a negative association with pre-attack warnings in all model specifications. The effect was substantively significant and statistically significant at a 0.05 α -level. The less a group depends on local populations' voluntary contributions – shelter, funds, recruits, supplies, etc. – the less likely the group is to give a bomb warning. My logit regressions also showed some support for H1c. The dummy variable *Maximalist* was negatively associated with pre-attack warnings, and statistically significant at a 0.1 α -level. The results were equivocal with regard to H1b. The Political Terror Scale (*PTS*) variable showed a negative association with pre-attack warnings once the anomalous case of Spain was omitted. However, the effect is not statistically significant.

My regression analyses did not show support for H1d, that religious motivations make militant groups less likely to give pre-attack warnings. In fact, the variable *Religion/Islam* showed a positive association with warnings, albeit a statistically insignificant one. On the other hand, the variable *Suicide* did show a negative (though not statistically significant) association with pre-attack warnings. Given the role of religion in pushing people toward suicide bombing as a tactic (Bloom 2004), the one thing we can say in support of H1d is that religion may exert an indirect negative effect on the probability of warning, by generating recruits for organizations that use suicide tactics.

8.2 Testing Hypotheses 5-10

The remaining hypotheses derived from my theory pertain to militant-government interaction. I tested these with further interviews of conflict participants in Northern Ireland and Spain. In keeping with the logic of Hypotheses 5 and 6, Northern Ireland police describe a “graduated response” to warnings based on their apparent credibility. The cost of responding (weighted by the probability of the threat being true) was evaluated against the guaranteed cost of mobilizing and evacuating the threatened area. Former RUC officers recall that in cases where a warning sounded “childish” it was only worth doing “a cursory check.” But if a warning sounded like previous IRA threats that had proved true, police undertook a full and costly mobilization. Police

in Northern Ireland and Spain responded to bomb warnings because of their felt obligation as “public servants.” However, based on logic similar to H7, the IRA and ETA reinforced police’s incentives with public accountability. By routing warning messages through media switchboards and charity hotlines, the militants ensured that there would be political consequences if police ignored their warnings.

The prospect of police mobilizations created temptation for the IRA. Consistent with H8 and H9, the IRA weighed the disruptive value of hoax warnings against the risk of losing credibility. Interviewees recalled that false warnings cost the group “10p,” the price of a telephone call, but they could cost the British government “millions upon millions of pounds” in “disruption to the economy.” Hoax tactics also risked spoiling the IRA’s credibility, however, making it difficult to convince police that the threat was real the next time the IRA planted a bomb. The 10p tactic “wasn’t used on a regular basis, because of that danger.” ETA’s experiences with disastrous police non-responses convinced the group that it was better never to lie, rather than risk being ignored again.

My case studies also support H10, that a high frequency of hoax warnings decreases militants’ incentive to give false warnings of their own. In a way, prank callers do the militant group’s work, disrupting economic life without requiring the militant group to do anything. However, IRA interviewees recalled that prank calls “could result in mayhem” if they interfered with the police response to real warnings. The IRA and ETA developed various techniques for making their own warnings stand out from pranks: the cultivation of intermediaries, placing redundant warning calls, the use of electronic “instruments,” and the use of code words. By making it harder to give a credible-sounding prank warning, the IRA and ETA decreased the effective rate of pranks. They also restrained their own use of hoax tactics to ensure that the government always responded when warned.

8.3 Insights about Terrorism and Insurgency

My research makes an important contribution by illuminating militant groups' political thinking. It explores the conflict between needing to use violence and needing to appear reasonable and ethical (Abrahms 2006). If guerrilla war is "war for the right to govern," militants must ensure that their violence does not morally abdicate that right (Lomperis 1996). At the very least, militants must *appear* to have minimized harm to the innocent, to whatever extent possible.

But whose opinions should a militant group care about, and when? By explaining variation in warning behavior, my research identifies specific conditions under which militants become wary of excessive killing. In doing so, my research unites two disparate theoretical strains within the terrorism literature. One strain argues that terrorists want "a lot of people watching, not a lot of people dead" (Jenkins 1975; Arce and Sandler 2009). The other argues (or at least assumes) that terrorists want a lot of people dead, because more killing amplifies terrorists' voices (Lapan and Sandler 1993; Kydd and Walter 2006). My research identifies specific conditions under which each argument applies. The difference does not come down to "old terrorism" versus "new terrorism" (Hoffman 1997) or religious terrorism versus secular terrorism (Hoffman 2006). The difference is explained by political factors that enhance militants' vulnerability, particularly the dependence on local populations' voluntary support. When militants lack a territorial stronghold or state sponsor, they must rely on local people for shelter, operational assistance, financing, and recruitment. Militants who live like guests can be thrown out for offending their hosts.

This finding has important implications for the terrorism and insurgency literatures. Sánchez-Cuenca and de la Calle (2009: 35) argue that terrorists (defined as "underground groups") have less incentive to spare civilians. Rebel groups "have to act as a proto-state in the liberated territories, imposing order and extracting rents;" underground groups "have very superficial contact with the population, because they cannot act in the open." I do find a difference between groups that control territory and groups that do not, but the effect is precisely the opposite: underground groups are *more discriminate* in their use of violence, because they cannot extract resources as easily

as a proto-state can. As one IRA interviewee put it:

[Y]ou depended on the community to give you food, to give you shelter, to give you transport. ... If there was a really bad operation ...they would say, "No, I don't want to support you anymore."

The contact between underground groups and local people is far from superficial. This is why they give warnings more frequently than proto-state (insurgent) groups.

This finding speaks to a related debate about classifying militant groups, and whether "terrorists" behave differently from "guerrillas" or "insurgents." Hoffman (2006: 35-36) distinguishes "terrorists" as actors who "do not function in the open" and "are constrained both numerically and logistically." Guerrilla and insurgent groups are "numerically larger" and capable of contesting territory (although they may also use violence "to intimidate or coerce"). My research undermines this framework, which selectively associates underground groups with "terror." It also undermines the theoretical rationale for distinguishing militant organizations into these stylized types. Hoffman's typological discussion is far more sophisticated than most, but it eventually reverts to using the US State Department's definition of terrorism because the definition is clearly stated and the fundamental goal is to salvage a term that everyone is using anyway.

The use of a term should not be confused with *usefulness*, however. "Terrorist" is what Waltz (1979: 10-11) calls "a theoretical notion," a term invented to "enable us to make sense of the data."

The debate over defining "terrorist" is a manifestation of a classic scientific problem:

The weakness of theories creates uncertainty of meanings ... Movement toward a remedy is impeded by disinclination to treat the question of meaning as a problem that can be solved only through the articulation and refinement of theories. The tendency instead is to turn the problem of meaning into the technical one of making terms operational. ... The technical usability of terms is unfortunately a weak criterion.

Terms should be used if their corresponding theories are useful, and my research shows that the existing theoretical framework gets important things wrong. "Terrorists," supposedly, are underground actors who create "propaganda by the deed." Theories of terrorism posit signaling mech-

anisms to explain the actors' behavior (Overgaard 1994; Hoffman and McCormick 2004; Kydd and Walter 2006; Arce and Sandler 2007). "Insurgents" and "guerrillas," supposedly, are above-ground actors who use military-style violence to contest state sovereignty. Theories of insurgency posit social mechanisms to explain actors' behavior (Mao 1989; Weinstein 2006; Mampilly 2011). My study of warnings shows that, contrary to these stylized accounts, underground actors like the IRA, ETA, and MRTA think and act like guerrillas, choosing tactics based on social theories (including Mao's). Above-ground groups that contest and control territory engage in symbolic violence. Abimael Guzmán described Lima as "a drum to be beaten;" Prabhakaran's LTTE targeted civilians to show that there was no "military solution on the ethnic problem." By the measure of warning, my regression analysis shows that groups with territorial control and state sponsorship actually commit more indiscriminate violence than the supposed terrorists. My operationalization of indiscriminate violence in terms of warnings shows that the difference is not just a matter of scale. In each attack, the perpetrator is more likely to choose the indiscriminate tactic of non-warning if that actor has territory or state sponsorship to free it from local accountability.

If terrorists explain their behavior by citing guerrilla texts and guerrillas explain their behavior with terrorist logic, there is something wrong with our existing theoretical framework. We can best understand these actors by de-emphasizing typology and applying all of the available theories to the behavior of militants in general.

8.4 Insights about Signaling and Cooperation

The interactions between militants and governments, in both my theoretical model and case studies, can be viewed as a form of cooperation. My study shows that cooperation is possible between militants and governments within a conflict environment. This differentiates my study from studies of cooperation among states and studies of cooperation in post-conflict settings (Fortna 2008). My research shows that non-state and state actors can build cooperation and an associated set of institutions (phone chains, code words, etc.) more or less from scratch while they continue to fight one another.

My research also adds to the literature on signaling between conflict actors. Militants' and governments' interests may not be completely concordant with regard to warnings. The militant group is not always attacking, and its expected signaling behavior may differ depending on whether it is attacking or not attacking at the moment. Fundamentally, a warning is a signal of the militant's type (attacking or not) and the government must decide whether the militant is telling the truth. This is the standard formulation in economic signaling games, such as Spence (1973) and Cho and Kreps (1987). My game theoretic model adds noise to the signal, in the form of prank warnings. Although noise complicates the government's inference of the militant's type, it may actually make the government better off by causing non-attacking militants to cease their false warning behavior. Noise increases the government's uncertainty until it reaches a certain level, at which it induces separation, making the signal *more informative*. This result is not unlike Haan and Sloof (2011)'s finding that separating equilibria may exist only when there are high levels of noise in the signaling "technology." That result is not borne out by the authors' experiments, but my research shows empirical support for a similar prediction. Another novel finding from my case studies is that the actors involved, in this case militant groups, may engineer the signaling technology endogenously. The IRA and ETA developed a set of procedural institutions, making it more difficult for pranksters to give credible-sounding warnings. By reducing the *effective* level of noise, militants enabled the government to respond, and enabled themselves to give a few spectacular hoax warnings from time to time.

The finding that the IRA and ETA engineered the signaling mechanism has another novel implication. The interaction between militants and governments in these cases was not purely cooperative. It also contained an element of coercion. Like a virus co-opting a host cell's resources, the IRA and ETA forced police to participate in an interaction that was destructive to them advantageous for the militants. It also served to reproduce militant violence in the future, making it politically feasible for the IRA and ETA to attack civilian targets again and again. The IRA and ETA worried, not unreasonably, that police might not respond to their warnings. In the long run,

ignoring one or two warnings might convince the militants to stop bombing, and actually save lives. In Schelling (1966: 101)'s words, unresponsive police would give would-be bombers "the 'last clear chance' to avert disaster."

However by giving warnings through an intermediary, the IRA and ETA foisted the "last clear chance" back onto the police. The use of an intermediary meant that the warning became public information. The audience cost literature argues that public signals carry more force (Fearon 1994). If leaders signal in public, they structure their own future payoffs so that they must follow through on promises and threats. Accountability is a source of bargaining leverage for the signal's sender. In the cases I examine, militants give warnings publicly to leverage *opponents'* accountability. By ensuring that the public knows about each warning, militants structure the *government's* future payoffs, ensuring the government's continued participation in the system.

Whether one views warnings and responses as primarily cooperative or coercive depends on how charitable we are in our assessment of the players. Would police have answered the warning calls if they hadn't arrived through an intermediary? How much good faith do we ascribe to the militant organization if fires on police who arrive to investigate a threat? In Schelling (1966: 120)'s words, "Should we describe the game as one in which the players are adversaries, with a modest admixture of common interest? Or should we describe the players as partners, with some temptation toward doublecross?" Both interpretations are accurate to a degree.

8.5 Directions for Future Research

This research dissertation can be extended in several ways. Empirically, the most intuitive extension is to continue the same work with the addition of more data and groups for analysis. My analyses of the existing dataset produced some satisfying results and some perplexing ones. For instance, the role of religion was not what prevailing wisdom would lead us to expect. The findings as they are suggest that scholars have been framing the role of religion the wrong way. Hoffman (2006: 89), for instance, highlights a particular causal pathway:

[R]eligious terrorists see themselves not as components of a system worth preserving but as “outsiders” seeking fundamental changes ... This sense of alienation ... enables the religious terrorist to contemplate far more destructive and deadly types of terrorist operations.

This is almost certainly true, but it does not mean that religion makes people more violent than secular ideologies could make them. By definition, all of the militant groups in my analysis are “outsiders seeking fundamental changes” to the rules of governance. My case study of *Sendero Luminoso* shows that secular groups can also harness the “sense of alienation” and portray “anyone who is not a member” as an enemy. Looking at the attacks in my database, *Sendero Luminoso* carried out 255 bombings, only one of them with a pre-attack warning. *Sendero's* rate of warning (0.4 percent) is slightly lower than that of Al Qa'ida in Iraq (0.8 percent) and substantially lower than that of Boko Haram (16 percent). It is absolutely true that religion can push people toward radical acts of brutality. But focusing only on what religion can do misses the equally important question of what secular ideologies can do. Some of the religious groups in my dataset behaved very badly. By the measure of warnings, the secular groups were worse, though not by a statistically significant margin.

Expanding the dataset to cover new years may change these results. My data set covers only the years 1970 through 2012. The Global Terrorism Database, which provides my basic case universe, includes roughly ten thousand new bombings of civilian, non-utility, non-telecommunication targets from the years 2013 and 2014. Not all of these attacks will meet my requirement that the perpetrator have carried out at least 100 bombings, but many will. In fact, the new data will elevate some groups, including the Islamic State, above the 100 bombing threshold for the first time. As new groups enter the data set, the frequency of group-level variables will change, because many of the groups in my existing data set are no longer active. The most immediate effect of including the new data points will be to increase the number of attacks by Islamist groups, including groups that carry out many suicide tactics and control territory. Without detailed knowledge of how many warnings the Islamic State gives, it is hard to say whether adding these attacks to the data will increase the frequency of warnings overall or alter the existing correlations between warnings

the independent variables in my logit models. Adding the Islamic State will definitely necessitate some rethinking of variables, such as the human rights measure of the target state (*PTS*, which did not have statistically significant effects in my model). A group like the Islamic State lacks a single target state. If governments' human rights abuses influence the Islamic State's behavior, which states matter? Does the answer to that question change depending on the location of the attack? These questions did not come up previously because groups that controlled territory (the Taliban, for instance) did not transcend as many borders or attract the simultaneous military attention of so many Westphalian states.

Lowering the number of attacks required for inclusion is another approach to expanding the analysis and increasing our confidence in its findings. Setting the threshold at a particular level may affect the findings if, for instance, the size or age of a militant group determines its propensity to give warnings. I take issue with Sánchez-Cuenca and de la Calle (2009)'s claim that underground groups have superficial contact with the population. However, the underground groups in my analysis are fairly sophisticated, long-lived organizations. There are many more underground organizations that do not carry out the 100 attacks required for inclusion in my dataset, either because they do not survive for very long or because they are simply less prolific. A small group might not need as much contact with the local population. Shapiro (2013) notes, for instance, that militant groups like Al Qa'ida in Iraq develop bureaucratic procedures much like businesses. Smaller businesses (technology startups come to mind) can operate out of one person's basement until they reach a certain size and require public investment. At some intermediate size between the lone wolf jihadist and Al Qa'ida in Iraq, an underground organization requires public investment, in the sense of local people offering their homes, food, money, and children to the group's cause. Organizations below that threshold of investment may have a more superficial relationship with the public, and they may be free to use more indiscriminate tactics. If so, setting a 100 attack threshold for inclusion might obscure part of an inverse U-shaped relationship between autonomy (or organizational size) and warning. Small groups that can self-fund through direct personal connections might be unlikely to give warnings. Underground groups of a larger size are dependent

on many local people supporting them, and must use more discriminate tactics. But groups with territory or state sponsorship are less dependent and may revert to indiscriminate tactics, like the very small groups can. This is conjecture, however. Reducing the number of attacks required for inclusion may have no effect other than to increase the number of observations in the dataset.

On a more theoretical level, my study of warnings shows the importance of speech acts as components of the physical attack. By determining who is present at the scene when a bomb goes off, the warning given by the perpetrating group has very real physical consequences. In general, however, our discussion of “attacks” focuses on the planting and explosion of bombs. This is *not* how the perpetrators think about attacks. Groups that give warnings are sophisticated in their management of a clumsy and dangerous weapon. There is no smart bomb available to these actors, so they must be especially careful about using the devices they have. The high-level RUC intelligence specialist recalled the level of discipline imposed on IRA cell members with regard to this issue:

If these guys went and planted a commercial bomb and then went away and didn't give a warning, they would have been subject to discipline which could have cost the their lives ... That's how brutal it was.

The warning call – and how it is made, and when, and through which intermediary – is just as important in the planning of the attack as the planting of the bomb. It is also just as important in determining the bomb's effects. In extreme cases, giving a warning can turn a bomb attack into something that may not fit the definition of terrorism. This applies in both state and non-state violence (and in the Israeli case examined earlier, the issue of who can be called a terrorist is very important politically). One natural extension of my research on state warnings would be to examine other cases where states find themselves fighting non-state actors. Do states engage in pre-attack warning behavior in similar cases, specifically to clarify who is a terrorist and who is not?

My research also shows the potential importance of studying false *threats*. There is a fine dis-

inction between threats and warnings, but we can distinguish them by their levels of detail and immediacy. Warnings inform the recipient that a specific attack is imminent or underway. Threats inform the recipient that an attack of some kind will take place, possibly during a time window or possibly contingent on the recipient failing to offer some concession. We have an extensive literature on states' use of contingent threats to deter or coerce, particularly during crises. My study of warnings shows that militants use these speech acts to impose economic costs on the state. False warnings create terror and social disruption "on the cheap," without the issuer having to take any physical action at all. Threats can accomplish the same thing – and perhaps more, because they are less time dependent and harder to prove false. If a militant group gives a warning, the security alert may last several hours. But if the group issues a vague threat, when does it expire? Such a threat may be more useful to the militant group. On the other hand, it may affect the group's credibility in the future. My study of warnings provides examples of militant groups preoccupied with maintaining their credibility so that future warnings will be believed. What do we make of groups that threaten attacks or call for attacks publicly, but fail to deliver on the threat? Did they ever intend to follow through? Were the attacks thwarted? Were the issuers simply clamoring for attention? Or were they publicly suggesting actions for local cells to take on their own? Given the recent attention to cellular organizations, the latter could be a useful expansion of this research on warnings.

Appendix

8.6 Equilibrium Analysis of the Signaling Model

Having presented the model's most interesting results in Chapter 6, I provide a full analysis of the model's equilibrium here, along with proofs of the model's propositions. I describe the model's equilibrium in four sections, based on the four strategic scenarios discussed in Chapter 6.. Those scenarios are defined by the inequality:

$$D_1 - D_2 - G + Z \gtrless 0 \gtrless D_1 - D_2 - G - X$$

This inequality contains the *Government's* condition for mobilizing when warned (on the left side of zero) and the attacking *Militant's* condition for warning a *Government* that will mobilize (on the right side of zero). The ordering of the inequality creates four strategic scenarios. First, for $0 > D_1 - D_2 - G + Z > D_1 - D_2 - G - X$, the *Government's* payoffs make mobilization impossible, even though attacking *Militants* prefer to give warnings and induce *Government* mobilizations. Second, for $D_1 - D_2 - G + Z > D_1 - D_2 - G - X > 0$, the *Government* would mobilize if warned truthfully, but attacking *Militants* prefer not to warn a *Government* that would mobilize. Third, for $D_1 - D_2 - G + Z > 0 > D_1 - D_2 - G - X$, attacking *Militants* prefer to give warnings to induce a *Government* mobilization, and the *Government* prefers to mobilize when it receives a truthful warning. Fourth, for $D_1 - D_2 - G - X > 0 > D_1 - D_2 - G + Z$, attacking *Militants* prefer not to warn a *Government* that will mobilize, and the *Government* can never afford to mobilize anyway. However, as noted in Section 2.1, this condition is impossible to achieve without specifying $Z = X = 0$, replacing the strict inequalities with loose inequalities, setting $D_1 - D_2 = G$, and specifying the *Government's* and attacking *Militant's* behavior when indifferent so that the *Militant* does not warn and the *Government* does not mobilize. The straining of assumptions in the fourth strategic scenario leaves little to discuss, other than to note the implausibility of both the *Militant* and the *Government* preferring a non-cooperative outcome. As such, when we observe an empirical pattern of non-warnings and non-responses, it most likely represents a missed opportunity. One

or more of the actors would have preferred cooperation to reduce casualties, but the preferences of the other player or the high frequency of false warnings (from the non-attacking *Militant* or pranksters) placed such cooperation out of reach.

Strategic Scenario 1: Pure Strategies With Truthful But Useless Warnings I begin the equilibrium analysis with a discussion of the first strategic scenario, where the *Government's* payoffs make mobilization impossible even though attacking *Militants* prefer to give warnings and induce mobilizations (formally, $0 > D_1 - D_2 - G + Z > D_1 - D_2 - G - X$). Given the *Government's* payoff structure, the fractions in its conditions for response to warnings and to non-warnings are improper ($1 < \frac{G}{D_1 - D_2 + Z}$ and $1 < \frac{G}{D_1 - D_2}$, respectively). For any defined probability θ_W and θ_{-W} , it follows that $\theta_W < \frac{G}{D_1 - D_2 + Z}$ and $\theta_{-W} < \frac{G}{D_1 - D_2}$. The *Government* will never mobilize, regardless of the signal and its resulting beliefs about the probability of an attack. Both types of *Militant* face a choice between warning or not warning an unresponsive *Government*. The attacking-type warns the *Government* because $D_1 > D_1 - X$ for $X > 0$ (and we specify, with no loss of generality, warning at indifference if $X = 0$). The non-attacking *Militant* receives zero for warning or not warning the *Government*, and with no loss of generality, we specify non-attacking *Militants* do not warn when indifferent. The *Government's* belief upon receiving a warning is $\theta_W = \frac{\alpha}{\alpha + \omega(1 - \alpha)}$, and upon receiving no warning, $\theta_{-W} = \alpha$. Thus, attacking *Militants* give pre-attack warnings that are self-exculpatory but useless, because all players know that the *Government* cannot mobilize in response.

Strategic Scenario 2: Pure Strategies With Non-Warnings and Truthful But Useless Warnings In this scenario, $D_1 - D_2 - G + Z > D_1 - D_2 - G - X > 0$, such that the *Government* would mobilize if warned truthfully, but attacking *Militants* prefer not to warn a *Government* that would mobilize. To maximize its payoffs, the *Government* must consider every possible strategy, including strategies that involve responding to non-warnings (which the attacking *Militant* may well give) and also to warnings, because it is possible to receive a prank warning that happens to coincide with a non-warning attack. The *Government's* possible strategies include always mobilizing, mobilizing only when warned, never mobilizing, and mobilizing only when not warned.

Given a choice between warning and inducing a mobilization, versus not warning and attacking a non-mobilized *Government*, the attacking *Militant* will choose not to warn because $D_2 - G < D_1 - X$. The attacking *Militant* will be indifferent between warning and not-warning a *Government* that always mobilizes (the payoff is $D_2 - G$ for warning or not warning), and we will specify the *Militant's* behavior when indifferent. The attacking *Militant* will warn a *Government* that never mobilizes, because $X > 0$ gives $D_1 > D_1 - X$ and for $X = 0$ we will specify that attacking *Militants* warn when indifferent. The attacking-type *Militant* will warn a *Government* that responds only to non-warnings because $D_1 > D_2 + G$.

For its part, the non-attacking *Militant* will warn a *Government* that responds selectively to warnings if $(1 - \omega)G > Y$. For $Y > 0$, the non-attacking *Militant* will not warn an always-mobilizing *Government* because $G > G - Y$ (and for $Y = 0$ we will specify non-warning at indifference). The non-attacking *Militant* is indifferent between warning and not warning a never-responding *Government* (the payoff is zero in either case) and we will specify behaviors as necessary to keep the equilibrium stable. The non-attacking *Militant* will never warn a *Government* that is responding selectively to non-warnings, because $0 < (1 - \omega)G$ for $\omega > 1$ and for $\omega = 1$ we will specify warning non-warning at indifference.

Given these fundamentals, it is possible to sustain an equilibrium in pure strategies with the *Government* always mobilizing, mobilizing selectively when warned, or never mobilizing at all. First, assume $(1 - \omega)G < Y$, such that non-attacking *Militants* will not warn a *Government* that mobilizes only when warned. If the *Government* is always mobilizing, attacking *Militants* will be indifferent about warning and we will specify that they do not warn. Non-attacking *Militants* will not warn. The signals of both *Militant* types pool and the *Government* cannot update its beliefs, giving $\theta_W = \theta_{\neg W} = \alpha$. The *Government* will mobilize in response to non-warnings if $\alpha > \frac{G}{D_1 - D_2}$, which implies that $\alpha > \frac{G}{D_1 - D_2 + Z}$. The *Government* will also respond to warnings and the always-mobilizing strategy is sustained. Because the condition for responding to non-warnings is more stringent, there is also a possibility that $\frac{G}{D_1 - D_2} > \alpha > \frac{G}{D_1 - D_2 + Z}$ and the *Government* may mobilize selectively in response to warnings. This strategy is sustainable within this range of α because both types of *Militant* follow the same strategy of non-warning and the pooling of signals gives

$\theta_W = \theta_{-W} = \alpha$, $\frac{G}{D_1 - D_2} > \theta_{-W}$, and $\theta_W > \frac{G}{D_1 - D_2 + Z}$. Finally, in ranges where $\frac{G}{D_1 - D_2 + Z} > \alpha$, the *Government* will never mobilize regardless of the signal received. With a never-mobilizing *Government*, attacking *Militants* begin to warn because $D_1 > D_1 - X$. (We assume warning at indifference for $X = 0$.) The non-attacking *Militant* begins to warn as well, because the *Government's* strategy makes the non-attacking type indifferent (the payoff is zero for warning or not warning) and we assume warning when indifferent. Because *Militants'* signals pool, the *Government's* beliefs are still $\theta_W = \theta_{-W} = \alpha < \frac{G}{D_1 - D_2 + Z}$.

Consider, however, what happens if we specify that $(1 - \omega) > Y$, such that non-attacking *Militants* prefer to give warnings to a *Government* that mobilizes in response to warnings. Both *Militant* types would warn an always-responding *Government*. This strategy profile is sustainable provided that $\alpha > \frac{G}{D_1 - D_2}$. However, for $\frac{G}{D_1 - D_2} > \alpha > \frac{G}{D_1 - D_2 + Z}$, the *Government* will selectively mobilize in response to warnings, but not non-warnings. The attacking *Militant* will prefer not to warn, but the non-attacking type will give warnings. If the non-attacking type gives warnings, the attacking *Militant* is the only source of non-warnings and the *Government's* belief upon receiving a non-warning is $\theta_{-W} = 1$. The *Government* will then find it possible to respond to non-warnings, rendering both *Militant* types indifferent, inducing both to warn and returning the *Government* beliefs to $\theta_W = \theta_{-W} = \alpha$, which as before were not sufficient to sustain an always-mobilize *Government* strategy. This circular logic renders equilibrium impossible for $\frac{G}{D_1 - D_2} > \alpha > \frac{G}{D_1 - D_2 + Z}$, except in mixed strategies (discussed below). However, it is possible to sustain an equilibrium if $\alpha < \frac{G}{D_1 - D_2 + Z}$, such that pooled signals cannot justify a *Government* mobilization in response to any signal. Signals will, in fact, pool when the *Government* is never mobilizing. Attacking *Militants* will warn because $D_1 > D_1 - X$ (and we specify warning when indifferent). Non-attacking *Militants* will warn because they receive zero for warning or not warning and we will specify warning when indifferent. As such, $\theta_W = \theta_{-W} = \alpha < \frac{G}{D_1 - D_2 + Z}$ and *Government* non-mobilization is sustained.

Thus, in strategic scenario two, the attacking *Militant* gives no warning when the warning would mobilize the *Government*; it gives warnings only when it knows those warnings will be useless to the *Government*. Empirically, one might see this logic playing out when militants attack very

high-value targets. If the high-value target is in a remote area or a crowded slum that cannot easily be navigated by emergency services, or if the target is too difficult to evacuate, an attacker knows that the government cannot mobilize. It will give warnings *specifically because it knows those warnings are useless*. But in cases where a high-value target can be evacuated, the militant will not give warnings. It will not give warnings *specifically because it knows those warnings would be useful to the government* and the value of the target justifies the political cost of harming civilians.

Strategic Scenario 3: Pure Strategies With Truthful Warnings and Casualty-Reducing Mobilizations

Here we consider cases where $D_1 - D_2 - G + Z > 0 > D_1 - D_2 - G - X$. Under these conditions, attacking *Militants* prefer to give warnings when such warnings can induce a *Government* mobilization. The *Government* prefers to mobilize when it knows it has received a truthful warning. Given the concordance of the players' preferences, cooperation may be possible so that civilians can be moved out of harm's way. The outcome depends in part on the frequency of prank warnings (ω) and the behavior of the non-attacking *Militant*. The non-attacking *Militant* will warn a *Government* that mobilizes only when warned if $G - Y > \omega G$ - i.e. if $(1 - \omega)G > Y$. Given a sufficiently high Y penalty for non-attacking *Militants* who give warnings, the non-attacking type will remain silent and *Militants'* signals will separate to a degree. (Full separation is impossible because of the non-zero probability of false warnings - noise that can never be fully eliminated from the signal.)

Assuming semi-separation, the *Government's* updated belief upon receiving a warning signal is that with probability $\theta_W = Pr(A|W) = \frac{(1)(\alpha)}{(1)(\alpha) + (\omega)(1-\alpha)} = \frac{\alpha}{\alpha(1-\omega) + \omega}$, the *Militant* is of the attacking type. The *Government's* condition for mobilizing in response to a warning, expressed in terms of α is: $\alpha > \frac{G\omega}{D_1 - D_2 + Z - G(1-\omega)}$. Because attacking *Militants* never give warnings, the *Government* knows, upon receiving no warning, that the probability of an attack is zero. The *Government* will never mobilize in response to non-warnings, because the condition for mobilizing, $0 > \frac{G}{D_1 - D_2}$ cannot be met.

Now consider *Militants'* strategies. Assuming that the *Government* is mobilizing in response to warnings and not to non-warnings, an attacking *Militant* gives a warning because of our assump-

tion that $X > D_1 - D_2 - G$. A non-attacking *Militant* does not give warnings because of our assumption $Y > (1 - \omega)G$. We must also consider the *Militant's* behavior if the *Government* is not able to mobilize in response to warnings. If this is the case, an attacking *Militant* gives a warning, because $D_1 > D_1 - X$ for $X > 0$ (and we assume warning when $X = 0$ and an attacking *Militant* is indifferent). Non-attacking *Militants* do not give warnings because the payoff for warning or not warning is zero and we assume non-warning when non-attacking *Militants* are indifferent. Because both *Militant* types are signaling truthfully, the *Government* is able to update its beliefs. $\theta_W = \frac{\alpha}{\alpha(1-\omega)+\omega}$ giving a condition of $\alpha > \frac{G\omega}{D_1-D_2+Z-G(1-\omega)}$ for the *Government* to mobilize when warned. Because the attacking *Militant* always sends warnings, $\theta_{-W} = 0$ and the *Government* never mobilizes upon receiving non-warnings.

We must also consider cases where $(1 - \omega)G > Y$ such that non-attacking *Militants* give warnings to a *Government* that mobilizes selectively in response to them. Under these circumstances, attacking *Militants* always warn. This is because for $X > 0$, $D_2 - G > D_1 - X$ (if the *Government* is responding) and $D_1 > D_1 - X$ (if the *Government* is not responding), and we assume warning when $X = 0$ and the attacking *Militant* is indifferent. A non-attacking *Militant* always gives warnings because of our assumption that $(1 - \omega)G > Y$ and we assume warning when the *Government* is not responding and the non-attacking *Militant* is indifferent between warning and not warning (the payoff is zero for either strategy). If both types of *Militants* gives warnings, the signal S contains no useful information and the *Government* cannot update its prior belief α about the probability of an attack. The condition for mobilization in response to warnings is $\alpha > \frac{G}{D_1-D_2+Z}$. Under signal pooling, we must also specify *Government* behavior when the *Government* receives an off-equilibrium signal (in this case, a non-warning). Specifying that the *Government* does not mobilize when not warned sustains the equilibrium.

Mixed Strategy Equilibrium In addition to the pure strategy solutions discussed above, a mixed strategy equilibrium solution exists. In this solution, the *Government* responds to warnings and to non-warnings with probabilities ρ and η , respectively; attacking *Militants* warn the *Government* with probability δ ; and non-attacking militants warn the *Government* with probability ϵ . The

requirements for this solution are as follows:

First, in order to play a mixed strategy of warning and not warning, the attacking *Militant* must be indifferent between warning and not warning, given the *Government's* strategy. With ρ and η denoting the *Government's* probability of responding to a warning or a non-warning signal, the *A-type* militant requires the following condition for indifference:

$$\rho(D_2 + G) + (1 - \rho)D_1 = \omega(\rho(D_2 + G) + (1 - \rho)D_1) + (1 - \omega)(\eta(D_2 + G) + (1 - \eta)(D_1 - X))$$

The left side of this equality represents the payoff from warning and the right side represents the payoff from not warning (given the probability, ω , that even if the *Militant* does not warn, the *Government* may receive a false warning anyway). Manipulating the equality gives a condition:

$$\frac{\rho - \eta}{1 - \eta} = \frac{X}{D_1 - D_2 - G}$$

It follows that $\rho > \eta$ or the *A-type* cannot be indifferent. $\eta < \rho$ would produce a negative value on the left side of the equality, requiring $G > D_1 - D_2$ for a negative value on the right side. This would make it impossible to satisfy the *Government's* minimum condition for responding to non-warnings, $\theta_{-W} > \frac{G}{D_1 - D_2}$, with any defined probability. The attacking *Militant* therefore requires that the *Government* respond to warnings with a higher probability than that with which it responds to non-warnings, in order to satisfy the condition for indifference.

Assuming that this condition is met, the *Government's* strategy depends upon the attacking *Militant's* mixing probability δ and the behavior of the non-attacking *Militant*. Allowing that the non-attacking militant may give warnings with probability ϵ , Bayes' Rule gives the *Government's* beliefs upon receiving a warning as:

$$\theta_W = \frac{\alpha\omega + \delta\alpha(1 - \omega)}{\omega + \delta\alpha(1 - \omega) + \epsilon(1 - \alpha)(1 - \omega)}$$

And upon receiving a non-warning:

$$\theta_{\neg W} = \frac{\alpha(1 - \delta)}{1 - \alpha\delta + \epsilon(1 - \alpha)}$$

For the *Government* to mix responses in response to warnings, we require:

$$\frac{\alpha\omega + \delta\alpha(1 - \omega)}{\omega + \delta\alpha(1 - \omega) + \epsilon(1 - \alpha)(1 - \omega)} = \frac{G}{D_1 - D_2 + Z}$$

giving a condition on the attacking militant's mixing probability, δ :

$$\delta = \frac{\alpha\omega(D_1 - D_2 + Z) - G(\omega + \epsilon(1 - \omega)(1 - \alpha))}{\alpha(1 - \omega)(G - (D_1 - D_2 + Z))}$$

For the *Government* to mix responses in response to non-warnings, we require:

$$\frac{\alpha(1 - \delta)}{1 - \alpha\delta + \epsilon(1 - \alpha)} = \frac{G}{D_1 - D_2}$$

giving a second condition on the attacking *Militant's* mixing probability:

$$\delta = \frac{\alpha(D_1 - D_2) - G(1 - \epsilon(1 - \alpha))}{\alpha(D_1 - D_2 - G)}$$

Setting the two expressions for δ equal to one another and solving for the non-attacking *Militant's* mixing probability ϵ gives a final condition to sustain the mixed strategy equilibrium:

$$\epsilon = \frac{\omega(D_1 - D_2 - G)(\alpha(D_1 - D_2 + Z) - G) - (1 - \omega)(G - (D_1 - D_2 + Z))(\alpha(D_1 - D_2) - G)}{(1 - \alpha)(1 - \omega)(G - (D_1 - D_2 + Z)) + G(D_1 - D_2 - G)}$$

We can now show that a mixed strategy solution exists for a situation mentioned above, under strategic scenario two ($D_1 - D_2 - G + Z > D_1 - D_2 - G - X > 0$, such that the *Government* would mobilize if warned truthfully, but attacking *Militants* prefer not to warn and induce mobilizations). Recalling that scenario, a situation exists where a pure strategy solution is not possible. The situation arises when $(1 - \omega) > Y$, such that non-attacking *Militants* prefer to warn a *Government* that responds only to warnings. If the *Government* can mobilize in response to both warnings and non-warnings, both types of *Militant* are indifferent, and we assume that they warn. Given the pooling of signals, $\theta_W = \theta_{-W} = \alpha$, and for $\alpha > \frac{G}{D_1 - D_2}$, the *Government* can sustain an always-mobilize strategy.

However, for $\frac{G}{D_1 - D_2} > \alpha > \frac{G}{D_1 - D_2 + Z}$, the *Government* will selectively mobilize in response to warnings, but not non-warnings. The attacking *Militant* will prefer not to warn, but the non-attacking type will give warnings. The attacking *Militant* is then the only source of non-warnings and the *Government's* belief upon receiving a non-warning is $\theta_{-W} = 1$. The *Government* will find it possible to respond to non-warnings, rendering both *Militant* types indifferent (and we specified, by assumption that indifferent *Militants* warn). The *Government* beliefs are once again $\theta_W = \theta_{-W} = \alpha$, which as before was not sufficient to sustain an always-mobilize strategy. Such contradictions are avoided when we solve for mixed strategies, as above. Restated, the conditions only for a mixed strategy equilibrium are:

- $G < D_1 - D_2$
- $\frac{\rho - \eta}{1 - \eta} = \frac{X}{D_1 - D_2 - G}$
- $\frac{\rho}{\eta} = \frac{G(1 - \omega)}{G(1 - \omega) - Y}$
- $\delta = \frac{\alpha(D_1 - D_2) - G(1 - \epsilon(1 - \alpha))}{\alpha(D_1 - D_2 - G)} = \frac{\alpha\omega(D_1 - D_2 + Z) - G(\omega + \epsilon(1 - \omega)(1 - \alpha))}{\alpha(1 - \omega)(G - (D_1 - D_2 + Z))}$
- $\delta > \epsilon > 0$
- $\epsilon > \frac{\omega(\alpha(D_1 - D_2 + Z) - G)}{G(1 - \omega)(1 - \alpha)}$
- $\epsilon > \frac{G - \alpha(D_1 - D_2)}{G(1 - \alpha)}$

- $\frac{G}{\omega(D_1 - D_2 - G) + G} > \alpha > \frac{G}{D_1 - D_2 + Z}$

These are all compatible with the conditions that produced the contradiction in pure strategies:

- $D_1 - D_2 - G + Z > D_1 - D_2 - G - X > 0$

- $(1 - \omega) > Y$

- $\frac{G}{D_1 - D_2} > \alpha > \frac{G}{D_1 - D_2 + Z}$

Equilibrium can be sustained in mixed strategies under these conditions, even though a pure strategy solution is not possible.



Proof of Proposition 1 The proof of Proposition 1 is simple, given the full equilibrium analysis presented above. To review, the proposition is that an attacking *Militant's* incentive to warn:

1. *Increases* as the political cost for harming civilians (X) increases
2. *Increases* as the *Government's* cost of mobilizing (G) increases (assuming the *Government* will mobilize when warned)
3. *Decreases* as the expected damage sacrificed ($D_1 - D_2$) increases (assuming the *Government* will mobilize when warned)
4. Depends *only on whether* $X > 0$ in cases where the *Government* will never mobilize.

Recall that if the *Government* never mobilizes, the attacking *Militant* receives D_1 for warning and $D_1 - X$ for not warning. The value of D_1 is irrelevant, and for any $X > 0$, the attacking *Militant* will warn. (Behavior when indifferent may be specified as necessary, including in the case where the *Government* always mobilizes and the attacking *Militant* receives $D_2 + G$ regardless of whether it warns.) In cases where the *Government* is expected to mobilize only when warned, the attacking *Militant's* choice of strategy depends on the following inequality, where the left side represents the utility of warning and the right side represents the utility of not warning:

$$D_2 + G \geq (1 - \omega)(D_1 - X) + \omega(D_2 + G)$$

ω appears in this expression because a prank warning could induce the *Government* to mobilize even if the attacking *Militant* does not warn. However, the condition for warning can be rewritten as $(1 - \omega)(D_2 + G) \geq (1 - \omega)(D_1 - X)$, simplifying to $X \geq D_1 - D_2 - G$. If the left side of the expression is greater, the attacking *Militant* will warn. This condition is easier to satisfy as X increases, as G increases, and as $(D_1 - D_2)$ decreases. ω does not play a role.

■

Proof of Proposition 2 Proposition 2 states that, assuming that attacking *Militants* warn, the *Government's* incentive to mobilize when warned:

1. *Decreases* as the *Government's* cost of mobilizing (G) increases
2. *Increases* as the expected damage saved ($D_1 - D_2$) increases
3. *Increases* as the political cost for ignoring truthful warnings (Z) increases

Assuming that attacking *Militants* warn, there two possible pure strategy behavioral profiles: Both types of *Militants* warn, or only attacking *Militants* warn. If both types warn, the *Government's* condition for mobilizing when warned is $\alpha > \frac{G}{D_1 - D_2 + Z}$. If only attacking types warn, the *Government's* condition for mobilizing when warned is $\alpha > \frac{G\omega}{D_1 - D_2 + Z - G(1-\omega)}$. In both expressions, increases in $(D_1 - D_2)$ and Z drive the denominator up, making the condition easier to satisfy. Increases in G drive the numerator up (and in the semiseparating case, drive the denominator down) making the condition harder to satisfy.

■

Note that Proposition 2 applies to pure strategy solutions only. “Assuming that attacking *Militants* warn” takes on a different meaning when attacking *Militants* are known to warn probabilistically. So does the *Government's* “incentive to mobilize,” given that we are solving for conditions of indifference by all players. In fact, the reverse of the proposition holds true in mixed strategies. This is because the *Government's* probability of responding to warnings (ρ) comes from the attacking *Militant's* condition for indifference: $\frac{\rho - \eta}{1 - \eta} = \frac{X}{D_1 - D_2 - G}$, simplifying to: $\rho = \frac{X + \eta(D_1 - D_2 - G - X)}{D_1 - D_2 - G}$. The expression $D_1 - D_2 - G$ appears in both the numerator and the denominator, but in the numerator it is weighted by η , the *Government's* probability of responding to non-warnings. Definitionally, $0 < \eta < 1$, so increasing $(D_1 - D_2)$ drives the denominator up relative to the numerator, and increasing G drives the denominator down relative to the numerator. These changes will drive the value of the fraction (and ρ downward). Intuitively, an increase in the expression, $D_1 - D_2$, makes warning less appealing to the attacking *Militant*, so the *Government* must respond less often to warnings to keep the attacker indifferent. Increasing G makes warning more appealing, so again, the *Government* must respond less often to warnings to keep the attacker indifferent.

Proof of Proposition 3 Proposition 3 states that, given the non-attacking *Militant's* condition to refrain from false warnings, $Y > (1 - \omega)G$, the incentive to warn falsely:

1. *Decreases* as the probability of prank warnings (ω) increases
2. *Decreases* as the political cost for giving false warnings (Y) increases
3. *Increases* as the *Government's* cost of mobilizing (G) increases

Obviously, increasing Y or decreasing G pushes the value of the left side of the inequality up and the right side down, respectively. Increasing ω decreases the value of the right side, given that G is being weighted by $1 - \omega$.



Table 5: Marginal Effects

Probability of Warning	Europe	Non-Europe	All Cases
<i>PTS</i> (fixed at 3)	0.1697 (0.13)	-0.0141 (0.02)	0.0079 (0.01)
<i>Autonomy</i> (fixed at 0)	-0.3784*** (0.15)	-0.0624** (0.03)	-0.0435* (0.03)
<i>Maximalist</i>	-0.0363 (0.10)	-0.0582* (0.03)	-0.0274* (0.02)
<i>Religion/Islam</i>	† †	0.0442 (0.05)	-0.0035 (0.03)
<i>Suicide</i>	† †	0.0662* (0.04)	-0.0297 (0.02)
<i>PrivateCitizens</i>	0.1723 (0.12)	-0.0840*** (0.03)	0.0005 (0.02)
<i>Business</i>	0.1640* (0.10)	-0.0420 (0.04)	0.0131 (0.02)
<i>CivilSociety</i>	0.3061*** (0.08)	0.0326 (0.04)	0.0944** (0.04)
<i>Infrastructure</i>	0.4185*** (0.08)	0.0153 (0.04)	0.0943** (0.05)
<i>Tourists</i>	0.4908*** (0.11)	† †	0.1867** (0.08)
<i>Europe</i>			0.3205** (0.13)
<i>N</i>	561	2579	3152
Predicted Probability of Warning	0.40	0.11	0.05

dy/dx for dummies is for discrete change (0 to 1); †variable dropped by Stata

Table 6: Logit Results with Dummy Variables TerrStrong and Statespond

Probability of Warning	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>PTS</i>	-0.7398*** (0.20)	-0.3696* (0.21)	-0.1050 (0.37)	0.2212 (0.33)	0.2269 (0.33)	0.1878 (0.30)
<i>TerrStrong</i>	-0.7954 (0.67)	-0.7106 (0.62)	-0.7217 (0.54)	-0.2136 (0.52)	-0.2362 (0.54)	-0.4145 (0.49)
<i>Statespond</i>	-1.372*** (0.49)	-1.755*** (0.59)	-2.076** (0.95)	-1.461*** (0.48)	-1.415*** (0.48)	-1.469*** (0.46)
<i>Maximalist</i>		-1.557** (0.70)	-1.909** (0.95)	-1.179** (0.54)	-1.183** (0.54)	-0.9355** (0.47)
<i>Religion/Islam</i>			-0.9778 (0.80)	-0.0359 (0.51)	0.0224 (0.54)	0.0663 (0.50)
<i>Europe</i>				2.388*** (0.85)	2.385*** (0.85)	2.526*** (0.79)
<i>Suicide</i>					-0.4281 (0.60)	-0.7663 (0.58)
<i>PrivateCitizens</i>						0.348 (0.43)
<i>Business</i>						0.2456 (0.43)
<i>CivilSociety</i>						1.152*** (0.45)
<i>Infrastructure</i>						1.156*** (0.42)
<i>Tourists</i>						1.750*** (0.55)
Constant	-0.0453 (0.47)	-0.2655 (0.43)	-0.4376 (0.41)	-2.983*** (0.85)	-2.986*** (0.88)	-3.400*** (1.1)
<i>N</i>	3,223	3,223	3,223	3,223	3,223	3,152
Log Likelihood	-729.185	-703.139	-694.660	-669.289	-668.879	-623.146
Wald χ^2	50.61	41.45	38.09	54.63	54.99	719.90
Pseudo R^2	0.2591	0.2855	0.2941	0.3199	0.3203	0.3455

*p<0.1; **p<0.05; ***p<0.01; Standard errors clustered on perpetrator group

Table 7: Codings of Militant Groups

Group	Target	Mean PTS	<i>Autonomy</i>	<i>Maximalist</i>	<i>Religion/Islam</i>
Abu Sayyaf	Philippines	3.77	1	0	1
African National Congress	S. Africa	3.98	2	1	0
Al Qa'ida in Iraq (AQI)	Iraq	4.40	0	1	1
AQAP	Yemen	3.77	0	1	1
AQLIM	Algeria	3.42	1	1	1
Al-Shabaab	Somalia	5	2	1	1
ASALA	Turkey	4	1	0	0
ETA	Spain	2.23	0	0	0
Boko Haram	Nigeria	4	0	0	1
CPI - Maoist	India	3.98	1	1	0
FLNC	France	1.95	0	0	0
FLNC Historic Channel	France	1.86	0	0	0
Dev Sol	Turkey	4.0	0	1	0
FMLN	El Salvador	4.21	2	1	0
GRAPO	Spain	1.96	0	1	0
FALN	USA	1	0	0	0
Hamas	Israel	4.45	2	0	1
Hizballah	Israel	3.60	2	0	1
IRA	UK	1.66	0	0	0
PKK	Turkey	3.76	1	0	0
LTTE	Sri Lanka	4.44	2	0	0
M-19	Colombia	4.76	0	1	0
FPMR	Chile	3.53	0	1	0
MILF	Philippines	3.94	1	0	1

Table 8: Codings of Militant Groups

Group	Target	Mean <i>PTS</i>	<i>Autonomy</i>	<i>Maximalist</i>	<i>Religion/Islam</i>
MIR	Chile	4.11	1	1	0
ELN	Colombia	4.88	2	1	0
UNITA	Angola	4.09	1	1	0
New People's Army	Philippines	3.87	2	1	0
FDN (Contras)	Nicaragua	3.2	2	1	0
PLO	Israel	3.0	2	0	0
Palestinian Islamic Jihad	Israel	4.35	1	0	1
FARC	Colombia	4.86	1	1	0
Sendero Luminoso	Peru	4.53	1	1	0
Taliban	Afghanistan	4.72	2	1	1
Tehrik-i-Taliban Pakistan	Pakistan	4.90	2	1	1
MRTA	Peru	4.67	0	1	0
ULFA	India	3.67	1	0	0

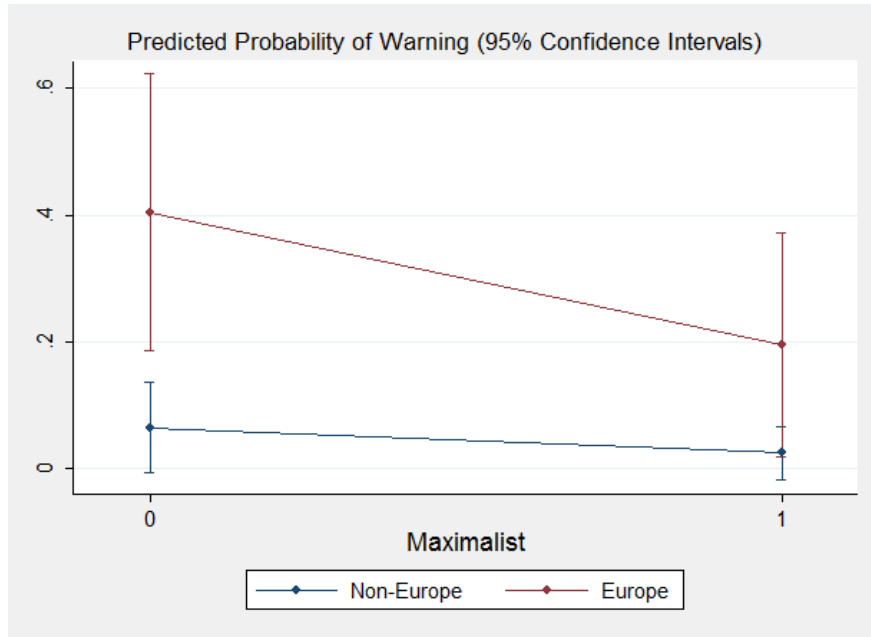


Figure 17: Effect of Maximalism: Europe vs. Non-Europe Cases ($PTS=2$, $Autonomy=0$, $Religion/Islam=0$, $Suicide=0$)

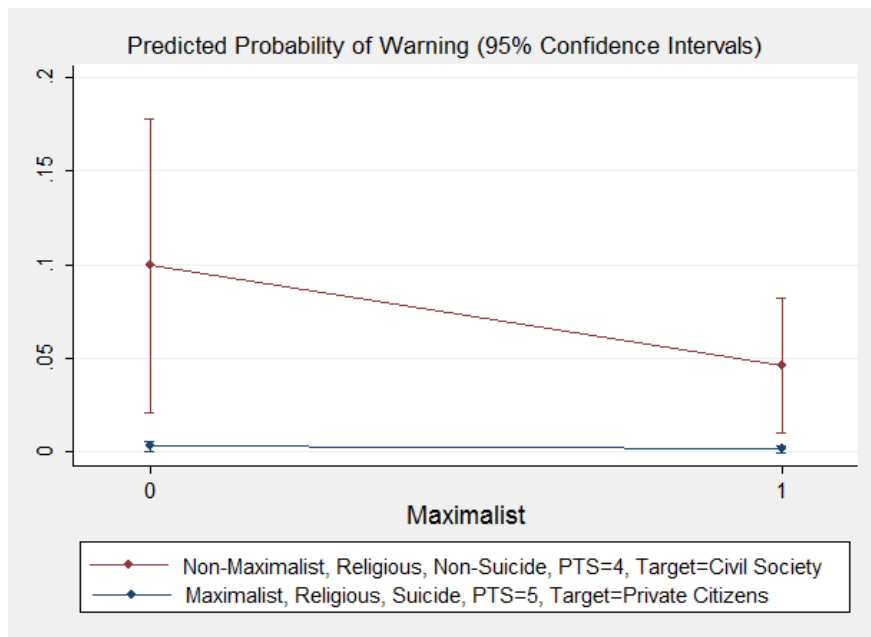


Figure 18: Probability of Warning: Maximalist, Religious, Suicide Attacker and Non-Maximalist, Religious, Non-Suicide Attacker

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