

DETECTING RELIGIOUS TERRORISM

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It is impossible to deny the primacy of terrorism in today's international environment. Since September, the news has been filled with analysis of past, present, and potential terrorist threats. But what of these threats? Are they merely taunts? Is another wave of attacks imminent? Or is there another reason why terrorist groups make threats against states?

Terrorism is not a new phenomenon, although only within the last few decades has it become a primary international security threat. And only since the end of the Cold War has this new form of "catastrophic terrorism" taken root in the international community. Terrorism has always been politically motivated. The rise of mass-casualty terrorism is a recent addition, however. In this terrorist framework unconventional methods and unconventional weapons are the norm, be that chemical weapons or hijacked airliners transformed into flying bombs. Innovative terrorism is a special threat to democracies - former White House counterterrorism czar Richard Clarke recognized this when he said, "Democracies don't prepare well for things that have never happened before."¹

How, then, to prepare for this sort of threat? Defense is attractive at first - minimal political costs and a chance to protect the citizens of a state. However, terrorists have proven protean in the past, developing new doctrines such as suicide bombing and airborne hijacking to combat defenses developed against other methods of attack. No defense is perfect, and most invite ingenious solutions to which there may be no reply. It is impossible to establish a stable defense against terrorism. The next potential option is preemption - root out the terrorist threat at its source. Yet terrorists flow across borders. Terrorist groups are insular, and defy penetration by intelligence services. And even if one group is eliminated, if the root causes of the terrorist threat remain, another group may emerge in its stead. There is one other option: deterrence. At first glance, this appears impossible. How to deter terrorists, actors whose primary motivation is to instill fear? This charge appears daunting, but it has been overcome in the past. Countervalue targeting during the Cold War was as squarely aimed at civilians as any terrorist act. Deterrence

¹ Clarke quoted in Miller, Judith, "Many Say U.S. Planned for Terror but Failed to Take Action," *The New York Times* 30 December 2001.

is an imperfect solution because its success is never guaranteed, although its failures can be documented.² However, deterrence against terrorism has a certain allure. If it is possible, then it is an attractive alternative to preemption or defense. Using a game-theoretic model, I hypothesize that under limited circumstances terrorism can be deterred - however, reaching the necessary criteria is difficult, and from a policy perspective, it may be unattractive.

What Sort of Terrorism?

One man's terrorist is another's freedom fighter.³ So goes the classic adage which encapsulates the difficulty of defining terrorism. Some terrorists fight "wars" of national liberation. Others are more preoccupied with ideological conflict – see the Communist terrorist groups of the Cold War such as the Baader-Meinhof gang and the Japanese Red Army. Others are motivated primarily for religious or millenarian purposes - bringing about the Kingdom of God on earth in whatever form a religion prefers. Definitional differences include whether or not states need be included, and if so, what of the British targeting of German cities in the Second World War - targeting which some consider terrorist? Others define terrorism as "revolutionary violence,"⁴ and while this precludes actions such as those on the part of the British, it assumes that all terrorism is meant to change the status quo, and that terrorists are in fact radical political organizations. This may be true to some extent, but not all revolutionary violence is terrorism. Schelling offers a better definition, when he labels as terrorism "violence intended to coerce the enemy rather than to weaken him militarily."⁵ However, this covers almost any form of political violence, be it executed by states (such as "terror bombing") or non state actors. For the purposes of this paper I will limit my definition of terrorism to that of *organized violence by non-*

² Bruce Russett put it as follows: "When deterrence fails, you know it; when deterrence succeeds, you may not know why it succeeded, and you may not even know that it succeeded." Russett, Bruce, "Between General and Immediate Deterrence," in *Deterrence in the Middle East: Where Theory and Practice Converge*, eds. Aharon Klieman and Ariel Levite. (Tel Aviv: Jaffee Center for Strategic Studies, 1993) 38.

³ Howard, Michael, "What's In A Name? How To Fight Terrorism," *Foreign Affairs* 81:1 (January/February 2002)

⁴ Walzer, Michael, *Just and Unjust Wars* (New York: Basic Books, 2000) 197 - although Walzer notes that this definition is "a small victory for the champions of order, among whom the uses of terror are by no means unknown." He also notes that the method behind terrorism is "the random murder of innocent people."

⁵ Schelling, Thomas C, *Arms and Influence* (New Haven: Yale University Press, 1966) 17.

state actors against civilians in order to bring about political change. This precludes state-sponsored terrorism, and it legitimizes violence against military forces by “terrorists” - a serious problem when one attempts to delineate the boundary of the civilian and the military professional or, more difficult, the draftee. Regardless, some sort of convention is necessary, and for the purposes of analysis here, the above fits.

However, even if terrorism is defined in as limited a manner as above, it still covers a great number of different groups with differing motivations and, more critical for my analysis, different means by which they can be deterred. Many groups using “organized violence against civilians in order to bring about political change” are fighting for a homeland. These are often impossible to distinguish from guerrilla combatants - the Viet Cong, the Irish Republican Army, Muslim radicals in Kashmir, and the Palestine Liberation Organization are all non-state actors who used or use violence against civilians⁶ in order to coerce or, better put in Schelling’s language, to compel a state in opposition to their goals to concede their wishes for national liberation.⁷ Can these groups be deterred? One method is removing their legitimacy by coopting their message, easier in cases where terrorists are fighting for national liberation because the state has an incentive to adjust to the desires of the populace.⁸ Another deterrence “pressure point” is the denial of access to that which they desire - their specific territorial demands. Threatening their ability to hold said territory can act as a deterrent on future behavior. This sort of deterrence may be difficult, but is possible. These terrorists place a high value on what they are fighting for, and since it is material, it can be threatened.

Here I examine a more difficult sort of terrorism. This is the phenomenon of religious or millenarian terrorism, now become a major if not dominant strain in the “family of terrorisms” within the last two decades. During the Cold War, ideological terror dominated. The Soviet

⁶ Again, here, the definition of a “civilian” is problematic - if a Palestinian believes that all Israelis are complicit in the repression of Palestinian national aspirations, are they civilians? Is a taxpayer who funds the war effort, or a factory worker turning out shells, or a newspaper columnist advocating vigorous war, a civilian? Or what of a reluctant draftee?

⁷ On compellence, see Schelling 79-80.

⁸ Crenshaw notes that one of the potential costs of terrorism is loss of popular support. See Crenshaw, Martha, “The Logic of Terrorism,” in *Origins of Terrorism*, ed. Walter Reich (Cambridge: Cambridge University Press, 1990) 17.

Union and other Eastern Bloc countries provided support to groups such as the IRA and the PLO, some of them even espousing Marxist views. Leftist ideology proved attractive to young radicals in Europe.⁹ But this ideology imploded in the late 1980s and early 1990s. With the collapse of Soviet communism, Marxist-Leninist dogma lost its appeal, and leftist terrorist groups suffered the same fate as states such as North Korea and Cuba, attempting to maintain Communism without support from Moscow Center. Religion did not lose its appeal. It in fact supplanted ideology in many cases.¹⁰ The success of the 1979 revolution in Iran and the mujahadin war against the Soviet Union emboldened Osama bin Laden and other Muslim radicals. On the other hand, groups such as Aum Shinrikyo moved to fill a sort of psychological or spiritual gap left in a vacuous, materialistic free-market economy¹¹, and succeeded for many Japanese. The appeal of religion resonates with millions. And such a resonance has potent political power, radicalized by some into terrorist action.

These terrorist organizations have political ambitions. Osama bin Laden aims to increase the role of Islamic law in the Middle East, topple Arab governments, and eliminate the US as a factor in the Middle East.¹² Shoko Asahara had a shadow government in place within Aum ready to seize power.¹³ But these movements are not national liberation movements of the sort recognizable to students of the Northern Irish or Israeli-Palestinian conflicts. There is a religious

⁹ Kellen's analysis of leftist terrorism in West Germany in fact states that one of the primary motivators behind, for example, the West German Red Army Faction was millenarianism (50), similar to religious terrorist groups. However, he makes no mention of Soviet backing of German terror groups. See Kellen, Konrad, "Ideology and Rebellion," in *Origins of Terrorism*, 43-58.

¹⁰ A retired American diplomat and Saudi specialist was quoted in the *Atlantic Monthly* in 1996 as saying, "What is far more troubling is that these attacks illustrate the changing nature of terrorism since the Cold War. There's been a marked decline in the fairly well funded, ideologically organized groups like the Red Brigades. More and more we're seeing a proliferation of amorphous underground Islamic groups that we've never heard of before." See Weaver, Mary Anne, "Blowback," *The Atlantic Monthly* (May 1996): 26.

¹¹ Metraux, Daniel A., "Religious Terrorism in Japan: The Fatal Appeal of Aum Shinrikyo," *Asian Survey* 35:12 (December 1995) 1145.

¹² Engelberg, Stephen, "One Man and a Global Web of Violence," *The New York Times* 14 January 2001. According to the Department of State, al Qaeda wishes to "establish a pan-Islamic caliphate." US Department of State, *Patterns of Global Terrorism 2001* (Washington, DC: US Government Printing Office, 2002) 105.

¹³ Metraux 1153. According to Lewis Dunn, "[Aum] appears to have had plans to use CBW terrorism as a means to kill senior Japanese officials, create a power vacuum, and then, without knowing how it would do so, take advantage of the chaos to seize power." Dunn, Lewis A., "Rethinking Deterrence: A New Logic to Meet Twenty-First Century Challenges," in *Deterrence and Nuclear Proliferation in the Twenty-First Century*, ed. Stephen J. Cimbala (Westport: Praeger, 2001) 35.

if not millenarian strain running through these groups - one could label it a “Paradise complex.” Lives become less valuable because martyrdom is a welcome fate.¹⁴ Also, groups such as Aum and al Qaeda have indistinct territorial goals. Unlike the PLO or the IRA, al Qaeda and Aum are expansive and abstract at the same time - they do not have a specific manifesto such as the removal of Protestant control over Ulster or withdrawal of Jewish settlers from territories occupied after the Six Day War. This may make deterring religious terrorists more difficult - they are both more willing to die and less concerned with specific territory. I plan to discern whether or not deterring these sorts of terrorists is possible.

In addition to focusing on religious terrorism, I wish to narrow my focus to terrorism against democratic states. I have selected this convention for three reasons. Most terrorism, especially religious terrorism, has been against secular, democratic states. There are exceptions, such as the struggle for Uighur nationalism in northwest China, but for ease of analysis I limit myself to religious terrorism directed against secular democratic states. Non-democratic states by their nature may deter terrorists, because of the lower costs of retaliation in an autocracy.¹⁵ From a policy perspective, it makes sense to study terrorist activities against states such as the United States. And the terrorist groups examined here have targeted democracies rather than autocracies. Religiously motivated terrorist groups pose a clear and present threat to the security of democratic states, both their physical security and the secure exercise of rights. And while there are differences among democracies, their similarities are greater than those among different autocracies, which may be anti-democratic for religious, ideological, or other reasons.

Why a focus on these sorts of groups and these specific targets? Religious terrorists of the al Qaeda and Aum genre have not supplanted national liberation terrorists as the dominant sort of “revolutionary violence.” In fact, such religiously motivated groups may be smaller and

¹⁴ Merari discusses how a move toward suicidal terrorism (reflecting largely on the bombing of the Marine barracks in Lebanon in 1983) has had major strategic outcomes, and about how defense against it is so difficult. See Merari, Ariel, “The Readiness to Kill and Die: Suicidal Terrorism in the Middle East,” in *Origins of Terrorism* 192-3.

¹⁵ This would prove fascinating for further study, and will be returned to later in terms of credibility and the policy impact of the findings herein. Crenshaw delves into this in discussing that dissident organizations in repressive states are often weak. Crenshaw in *Origins of Terrorism*, 13.

less organized than their counterparts, or at the very least they lack the experience of their more established counterparts. However, it is probable that they will expand and become more powerful. These groups have demonstrated the will to act against democratic states using any means necessary, differing in a qualitative manner from those of other terrorist groups. There is a long tradition of terrorist hijacking of airplanes, and suicide bombing has been used for decades now. But only a religious terrorist group - Aum - has used a traditional weapon of mass destruction in the sense of NBC terrorism.¹⁶ And al Qaeda turned box cutters and passenger jets into a new sort of weapon of mass destruction. Religious terrorism is not known for its selective nature relative to “classic” terrorism, and while the use of weapons of mass destruction prompts a new level of fear far greater than assassination and hostage taking, it presents a greater threat to those states targeted. The use of weapons of mass destruction is a threshold never significantly crossed by a terrorist group before the 1995 Tokyo sarin attack, and would more likely be used by a group seeking some sort of apocalypse or a chance at paradise than a state seeking to establish a territory in the near term.¹⁷ September 11 demonstrated to the United States and the world the importance of this sort of terrorism. If it can be deterred, then the likelihood of deterring all forms of terrorism increases. It is a rigorous standard, but one which can be tested.

Deterrence, The Importance of the State, and “Rationality”

Much of the deterrence literature developed since the end of the Second World War has revolved around state versus state conflict, either between a nuclear-armed Soviet Union and United States or conventionally armed rivals such as Britain and Nazi Germany in the 1930s. Is it possible for a state to deter a non-state rival, or a non state actor to do so to a state?

Commonalities between states and terrorist groups provide clues as to how terrorist groups may be deterred. One important similarity in these terrorist groups is the existence of leadership

¹⁶ An American religious cult, the Rajneeshees, used salmonella at a salad bar in an Oregon town in 1984, but this lacked the power or the catastrophic effect of the Aum attack. For details on the Rajneeshee incident, see Miller, Judith, Stephen Engelberg, and William Broad, *Germs* (New York: Simon and Schuster, 2001) 14-33.

¹⁷ The retribution for the use of a weapon of mass destruction would be swift, as al Qaeda has seen in the American operation in Afghanistan. If, for example, the PLO were to threaten Tel Aviv with a biological weapon, the reaction would be so overwhelming on the part of the Israelis as well as the international community, making Arafat a pariah, that there would be no hope of establishing a Palestinian state.

structures. This is not the same sort of terrorist network that spawned Timothy McVeigh, one within which there is really no leadership. Some religious terrorists operate as autonomous cells, but groups such as al Qaeda and Aum possess defined structures.¹⁸ This is critical, because non-state actors lack the territorial resources a state possesses and which another state can target. For example, American nuclear strategy in the Carter Administration was designed to target the Soviet leadership.¹⁹ But a good deal of American nuclear policy was aimed at Soviet nuclear forces and cities, resources which strategists believed were of high value to the Soviet political and military leadership. Non-state actors like religious terrorist groups lack this. In the late 1990s the United States attempted to punish Osama bin Laden by firing Tomahawk cruise missiles at the Sudan and Afghanistan. These had no permanent effect on his network, except to prod him to improve internal security and to disperse his resources.²⁰ Aum had offices in New York and Moscow as well as all over Japan, and was known to have infiltrated elements of the Russian military.²¹ This multinational aspect of religious terrorism makes deterrence by punishment more challenging; what is there to punish? It is not impossible. From a conceptual perspective, even religious terrorists hold certain things to be valuable, and if a state has the ability to deny these things to the terrorists it gains a certain level of deterrence credibility.

The question of value begs another question - are terrorists rational? The average American would answer no. To Westerners, suicide bombing and the use of weapons of mass destruction to "reach Paradise" are the acts of irrational "fanatics" and "radicals." Yet religious terrorists such as Shoko Asahara and Osama bin Laden are rational, in the game-theoretic sense.

¹⁸ See interview by Bruce Hoffman with Peter Bergen in *Atlantic Unbound* 9 January 2002, where Bergen discusses both the "rational" structure of al Qaeda as well as the existence of an upper leadership echelon within the organization. See also McFadden, Robert D., "Bin Laden's Journey From Rich Pious Lad to the Mask of Evil," *The New York Times* 30 September 2001, where former al Qaeda paymaster Jamal Ahmed al-Fadl compared al Qaeda to a modern corporation. For Aum, see Metraux 1153 and Stern, Jessica, "Terrorist Motivations and Unconventional Weapons," in *Planning the Unthinkable*, eds. Peter R. Lavoy, Scott D. Sagan, and James J. Wirtz. (Ithaca: Cornell University Press, 2000) 206.

¹⁹ Presidential Decision (PD) 59, approved by President Carter in July 1980, prioritized political and military command and control centers over population centers, economic recovery resources, or counterforce targeting. For more, see Leitenberg, Milton, "Presidential Directive (PD) 59: United States Nuclear Weapon Targeting Policy," *Journal of Peace Research* 18:4 (1981): 309-317.

²⁰ Risen, James, "US Pursued Secret Efforts to Catch or Kill Bin Laden," *The New York Times* 30 September 2001.

²¹ Miller, Engelberg and Broad 159-160.

They “engage in foresightful planning” and “seek consistent goals.”²² Terrorist objectives are radically different from the goals of the states they oppose, but they are definite goals toward which these groups exert their energies. Using Morgan’s three conceptions of rationality, terrorist groups are at least “rational” and “sensible” if not “perfect.”²³

Terrorist groups can take major chances and still be rational, if they are risk neutral or risk acceptant. Relative risk propensity may have a serious impact on the deterrent effect of retaliatory threats. However, even if a terrorist group is risk acceptant, as groups like Aum and al Qaeda appear to be, this does not change its status as a rational actor.

It is easier for a terrorist group to deter a state. A state has more to be held hostage than a religious terror group. While this paper focuses on the potential for a state to deter a non-state terror group, a state has many more deterrable elements, and these religious terror groups have demonstrated the means and willingness to deliver devastating strikes. It would be far more surprising if this sort of deterrence were impossible.

State-sponsored religious terrorism is a different case, but some commonalities exist. If a religious terrorist group is “sponsored” by a state, deterrence should be easier. For example, religious terror groups sponsored by the Islamic Republic of Iran, if dependent on Iran for logistical and financial support and adrift without, are vulnerable to deterrent threats aimed at Iran. But there are few religious terror groups tied closely to a state supporter. Terrorism is a relatively inexpensive enterprise, and a robust religious terror group has the added advantage of exacting financial benefits from its members. Aum made millions from its members, without ties to any state apparatus.²⁴ The financial relationship between al Qaeda and the Taliban was asymmetric, bin Laden emerging as a significant sponsor of the regime.²⁵ Even in the case of al

²² O’Neill, Barry, “Game Theory and the Study of the Deterrence of War,” in *Perspectives on Deterrence*, eds. Paul C. Stern, Robert Axelrod, Robert Jervis, and Roy Radner (New York: Oxford University Press, 1989) 142. Stern also notes that “religious groups may have substantively irrational goals, but they are still ‘rational actors’ maximizing a set of objectives.” (228)

²³ Morgan, Patrick M., *Deterrence*, 2nd ed. (Beverly Hills, CA: Sage Publications, 1983) 80-1.

²⁴ *Patterns of Global Terrorism* 91 on lack of external funding; Metraux 1140 on how Aum “fleeced” millions of dollars from its followers.

²⁵ *Patterns of Global Terrorism* 106: “Bin Ladin [sic], member of a billionaire family that owns the Bin Ladin Group construction empire, is said to have inherited tens of millions of dollars that he uses to help finance the group.

Qaeda, targeting Afghanistan might not deter their actions, given that they have other bolt holes and areas to which they can flee and from which they can operate.

Because the groups examined here are not states, deterrence is more difficult. However, because terrorists and especially terrorist leaders responsible in these cases for the planning and execution of attacks hold certain things to be of value and because they are “utility maximizers,” I hypothesize that they can be deterred.

Immediate Versus General Deterrence

There are significant differences between immediate and general deterrence which do apply to my analysis herein. It may be easier for a state to use deterrence to prevent “the next attack,” but it may be impossible for a state to deter a terror group from forming in opposition to a state’s policies without wholesale changes in the nature of that state - impossible from a policy perspective, constituting a success for the terrorists.

General deterrence here means that threats a state could pose would prevent a religious terror group from targeting that state.²⁶ This may be the form of deterrence proffered by autocratic states - it is easier for leaders of non-democratic states to repress civil liberties and root out terrorist cells using paramilitary and security forces. Potential terrorists will think twice before targeting them, whereas democracies are relatively more vulnerable. Open borders, protection of civil liberties and dissent means that they can easily enter and cannot be targeted early for criminal or paramilitary coercion. And it is harder for democratic states to offer a credible deterrent against the formation of a terrorist group - even after the 1995 Tokyo subway

Al-Qaida also maintains moneymaking front businesses, solicits donations from like-minded supports, and illicitly siphons funds from donations to Muslim charitable organizations.” Also, according to the New York Times, bin Laden was “a spiritual and political ally, and a source of money.”

²⁶ Bruce Russett states that “general deterrence” is the situation which exists before threats have been made by either side in a crisis. See Russett 34-35. Morgan’s distinction between immediate (or “pure”) deterrence and general deterrence is that immediate deterrence is the prevention of war in a crisis environment, where one side is seriously considering war, whereas general deterrence involves the general relationship between two parties - see Morgan 30-31. Here, however, I assume that there is a state of “undeclared war” between the two parties, and the prevention of an attack is the prevention of the outbreak of war (attack and retaliation back and forth). Morgan does state that “the target in all this is ‘immediate’ deterrence, where one state [although here I do not limit the analysis to states, for obvious reasons] is seriously considering an attack, leading its opponent to specifically threaten a forceful response in order to prevent it.” (Morgan 80)

attack, the Japanese government did not invoke the Anti-Subversive Law, outlawing Aum.²⁷ The United States may not recognize the legitimacy of al Qaeda, but before September 11, it would have been nearly impossible to prosecute al Qaeda sympathizers within the United States without probable cause, would have been daunting. While resolve in a democracy is often stiffened by an attack from a terrorist organization, the attack's occurrence in the first place is a failure of general deterrence.

Immediate deterrence is more realizable.²⁸ It is easier for a state, after absorbing one devastating attack, to demonstrate that no other attack will be allowed without major retaliation. If no other attack occurs, this may be a deterrence success. However, what of retaliation for the first attack? Retaliation is then compellent as well as deterrent - it demonstrates the resolve of a state to retaliate for terrorist action and improves the quality of a deterrent, but it also is designed to pressure a terrorist group to cease and desist in its attacks. This is a difficult distinction to make, but here the threats are meant to prevent the action in the first place, not to stop it after it has occurred. Retaliation might be compellent, but any time that it is necessary is a deterrence failure. Can immediate deterrence be realized without it being retaliation for an attack? A group can exist and even threaten a democratic state. But if that state threatens retaliation, and then no attack occurs, we can consider this a deterrence success - it may be only one attack or only one element of the terrorist group's existence, but regardless, the terrorist group has been deterred.

Whether or not this deterrent is credible will depend on what the state's history is in dealing with terrorism - it is possible that a group like al Qaeda is deterred from attacking Israel because of its history of retaliating against terror. However, it is also possible that al Qaeda either is considering launching an attack in the future, or would rather attack the United States, or even is planning to attack Israel in the future and is biding its time. Studying deterrence is akin to listening for "dogs that don't bark." A historical comparison was the situation in which the

²⁷ *Patterns of Global Terrorism* 90.

²⁸ Russett's three conditions of immediate deterrence: "Officials in at least one of the adversary states must actively be considering launching an attack on the other. Leaders of the other state must be aware of that and, to prevent such an attack, issue threats to retaliate. These threats and warnings most likely must be specific, communicated by official statements or by overt military actions..." Russett 35.

Germans and British found themselves at the beginning of the Second World War. The threat of strategic bombing did not prevent war (a failure of general deterrence) but for some time there was a mutual desire to avoid city bombing campaigns (perhaps a success of immediate deterrence).²⁹

What I will examine here is that form of immediate deterrence. I will assume that these groups exist and would prefer to target the states in question - the United States for al Qaeda and Japan for Aum Shinrikyo. However, I will assume that we are speaking of deterring sizable attacks - perhaps allowing for minor attacks which did not pose a clear and present danger to the security of the states in question, but without allowing for major attacks on the homeland.³⁰ As such this fits Russett's model of immediate deterrence rather than general deterrence, although it is even more limited in some respects.

A Game-Theoretic Model

Building the Model

Here I use a two-player sequential game between a terrorist group (labeled T) and a democratic state (labeled S).³¹ There are four moves in the game. I assume first that the initial threat will come from a terrorist group rather than from a democratic state. There are no probabilities factored in - either the terrorist group makes the threat or it does not. The second sequence is that the democratic state makes a retaliatory threat - attempting to deter the terrorist group from attacking. It is here where a state could threaten to attack a terrorist group, even to

²⁹ Quester, George H., *Deterrence Before Hiroshima* (New York: John Wiley and Sons, 1966) 121-122 details the breakdown in immediate deterrence between Britain and Germany.

³⁰ As such, I may allow for al Qaeda attacks on US embassies abroad, as well as the targeting of the USS Cole (which was not a civilian target regardless) without allowing for September 11. This is a similar concept to Brophy-Baermann and Conybeare's idea of a "'natural' rate or process of terrorist attacks," and that an aberration from this - such as a September 11 or a Tokyo subway attack - would be an unanticipated attack. See Brophy-Baermann, Bryan, and John A. C. Conybeare, "Retaliating against Terrorism: Rational Expectations and the Optimality of Rules versus Discretion," *American Journal of Political Science* 38:1 (February 1994) 197.

³¹ This game is somewhat similar to deterrence models presented by Kilgour and Zagare (Kilgour, D. Marc, and Frank C. Zagare, "Credibility, Uncertainty and Deterrence," *American Journal of Political Science* 35:2 (May 1991) 309 and 314 for matrices) and by Brophy-Baermann and Conybeare, although this model is less generalized because specific payoffs are delineated. In this respect, it is more similar to "low-game theory" than "high-game theory" - in low-game theory, numbers are specified (as done here with the payoffs) but it will be somewhat difficult to design a general theory. (O'Neill 135)

preempt said group before it could make a threat. Again, there are no probabilities factored in here - the state knows that the terrorist group has made or not made the threat, and it makes a similar threat in response. It is unlikely but possible that a state might make a threat against a terrorist group without said state being threatened - I will build this factor into the payoff matrix. Once the threats are made, two moves remain. Again, the terrorist group is the first mover. Having either made a threat or not made said threat, and either receiving a threat in return or not receiving that threat, the terrorist group decides whether or not to attack. If the terrorist group decides to attack, having made no threat, but the state has threatened, this is a deterrence failure for the state. If the state makes no threat, there is no deterrence failure. And if the terrorist group decides to attack having made a threat but no threat has come from the state being threatened, there is no deterrence failure because no move has been made by the state to deter the other actor. However, if the terrorist group has made a threat, and the state has retaliated with its own threat, we have the potential for deterrence success. If the terrorist group decides not to attack, then deterrence has succeeded - but if the terrorist group still chooses to attack, deterrence has failed. There is a final move on the part of the state - retaliation. The state can choose to attack whether or not there have been threats on either side, as well as whether or not the terrorist group attacks. If there were no threats, no attack, and no retaliation, then peace is at hand, but this is not a deterrence success. Deterrence requires threatening something of value to the other player which prevents him or her from acting. If, however, threats occur on both sides, and the terrorist group chooses not to act, but the state still attacks, this too is a deterrence failure. Technically, the state has deterred the attack from the terrorist group, but at the same time, attacking the terrorist group without provocation eliminates the credibility of the deterrent threat. It also means that the terrorist group has failed to deter the state. If a terrorist group is going to be attacked whether or not it attacks, what good is there in forbearance? The only chance of deterrence success here is for threats to be made on both sides, the terrorist group to choose not to attack, and the state as well to choose not to attack.

We can first look at this game matrix by ordinally valuing the payoffs, so as to show which are preferable to the others. First, the values for the democratic state. I will assign values on a scale of 1 to 16, 16 being the best possible outcome, 1 being the worst, and thereby allowing me to rank the outcomes in a relative manner without worrying about absolute values. For example, a “1” is more than likely a catastrophic negative in terms of absolute utility. For ease of explanation, Appendix A includes a list of the sixteen possible outcomes, lettered A through P. These outcomes are the same for the democratic state or the religious terror organization. The best possible outcome for the democratic state here is a deterrence success. The terrorist group makes a threat, which is countered by a similar threat from the state, and nothing happens. This is scored a 16, whereas a lack of conflict with no threats made ranks a 15. At first, it would appear that a lack of threat would be preferable - however, it also opens the door for surprise attack. The deterrence success node (D) is preferable to the *status quo ante bellum* (P) because of the heightened uncertainty that comes when a terrorist group exists but makes no explicit threat at the state.³² In order to balance this, I also assume that the worst possible outcome comes when both sides make threats, but where the terrorist group attacks and the state fails to retaliate (B). This is scored a 1, whereas a surprise attack by a terrorist group with no retaliation scores a 3 (J). It is not the second-worst outcome because in fact, a worse outcome would be if the state did not respond to an attack by a terrorist group, but threatened retaliation when no threat had been made in the first place (node J, scored as 2). This is considered worse because the threat made by the state without a complementary threat by the terrorist group, inviting an attack by the terrorist group, could be ruinous in that citizens of the state could argue that the attack was the consequence of the state’s threat. The third and fourth best possible outcomes for the democratic state are the absence of conflict, but absences where one or the other side makes an unmatched threat. It is in fact better for the democratic state to make a threat without a threat having previously been made by the terrorist group than for the terrorist group to make a threat

³² Kilgour and Zagare call this node (D) the “sure-thing deterrence equilibrium.” (Kilgour and Zagare 319)

for which there is no follow-through (node L scored as 14, node H scored as 13).³³ The fourth potential attack without retaliation would be that where the terrorists threatened, but the state refused to threaten retaliation (node F). This is not scored as low as the others because the state chose not to offer a retaliatory threat in the wake of the threat from the religious terrorist group; as such, retaliation is not expected in this case compared to the others. The next worst scenario for a democratic state would be an environment where no threat was made by the terrorist group, but a threat was made by the state - then the terrorist group decided not to act, but the state attacked the terrorist group regardless (node K). If this was a prisoner's dilemma, such a preemptive attack might be attractive - but it destroys the deterrent credibility of the state by showing that even when the terrorist group made no threat, and did not attack, the state still attacked the group. What, then, would stop the group from attacking in the future? I assume here that the attack by the state does not wipe out the terrorist group, or that if it does, another group rises to take its place. Next worst would be a surprise attack by the state on a terrorist group that neither threatened action nor took it, and in the absence of a threat beforehand by the state attacking (O). This is better because threats can serve here as a signaling device - if a threat has been made beforehand by a state, a terrorist group could prepare for an attack, disperse its forces or preempt. This sort of an attack would have a greater chance of success, then, than an attack with a warning beforehand. In a democracy, it might be hard to justify such a surprise attack on a terrorist group, but it is possible, especially if there is a previous history of conflict or threat between the two parties. It is better, however, for the state to attack the terrorist group without a previous attack from the terrorist group and without advance warning from the state if the terrorist group makes a threat (node G, scored as 7). This sort of preemptive attack is not deterrent, but a state could more easily justify it. The final sort of surprise attack from a state without an attack from a terrorist group is an attack where both sides have made warnings (node C). At first glance, this should not be the case. This sort of an attack would be less likely to be

³³ Morgan 25 on ambiguous inhibition - "Is the mere presence of the threat sufficient, or is deterrence the result of the threat having a particular impact?"

successful because the state would have signaled its intentions by issuing a warning. However, the fact that the state in fact did issue a warning is critical for democratic states, given that a terrorist group has already issued a threat. It is more “acceptable” to attack if a threat has been issued after a threat received. However, we see that this option is less preferable to any other option where attacks are made in retaliation, or no attacks happen at all. This option is the “best of the worst.” It is, in fact, better to retaliate against a terrorist attack where the state has made a threat, even when the terrorist group has made no threat (node I, scored as a 9). Why is this preferable to a preemptive attack? Because retaliation for a terrorist attack, however much damage is incurred by the terrorist attack in the first place, is more palatable than preemption. It is easier to mobilize political support behind retaliation, even when the attack may have been “provoked” by a threat from the state without a previous terrorist threat. However, it is even easier to mobilize political support in the wake of a surprise attack for retaliation (node M). Such a surprise attack may be more devastating in the short term, but the retaliation to be brought may be more powerful and more likely to wipe out a terrorist organization using much of its resources in the initial attack. If a threat is received from a terrorist group in advance, the value of retaliation is even higher (node E for retaliation without a prior threat by the state, node A for retaliation when both sides make threats - tit-for-tat). In summary, the best options for the state are a lack of fighting on either side, with deterrence preferable to status quo ante and both preferable to the uncertainty present when one side makes a threat but the other does not. The next best options for the state are in fact retaliation instead of preemption. If this was a one-shot game instead of a repeated iteration, preemption would be preferable to retaliation, and might even be preferable to deterrence and the absence of conflict. But both for political purposes and because this is an immediate deterrence environment, attempting to prevent one attack instead of preventing conflict writ large, preemption is demoted below retaliation. Retaliation carries the benefit of punishing the other side for attack and ensuring, or at least attempting to ensure, that defection (an attack after threats have been made) does not occur in the next round of the game. The worst result for the state would be to absorb a terrorist attack without retaliation.

In assigning rankings for the terrorist group, I make a select number of assumptions. First, there is a preference for the offense over the defense - given the choice, terrorists will always prefer not to receive a retaliatory blow than to receive one.³⁴ There is also a preference for attacking rather than holding, although this fluctuates. The best situation for a terrorist group, assuming that it would prefer to strike a blow against the state in question - a fair assumption, for why else would the group exist? - is to strike a surprise blow without any retaliation (node N). The worst is to make a threat, receive no threat in return from the state in question, not attack, and still be attacked by said state (node G). Otherwise, the best options for the terrorists are those where an attack can be made without any attack in return (nodes J, F, and B, in that order), and the worst options are to be attacked without attacking in the first place (nodes O, C, and K, from worst to best). However, it is the intermediary options which are difficult. In four of the remaining eight nodes, no action is taken by either side. In the other four, the terrorists manage to strike, but they receive a retaliatory blow from the state.³⁵ It is here where risk can be factored in. There are three options. The terrorist group maybe risk averse, from which would follow a preference for standing pat relative to attacking and receiving a retaliatory blow. It may be risk acceptant, wherein it would prefer to strike a blow and receive retaliation than forswear an attack. Or, it may be risk-neutral, in which case it would be indifferent between standing pat and attacking. Nodes A, E, I, and M represent attacks with retaliation following, and nodes D, H, L, and P are those where no attack occurs. Out of the four attacks with retaliation, the best is that where the terrorist group makes no threat, but the state does threaten. Retaliation may be more likely, but the impact of a surprise attack will be greater. In addition, the terrorist group will be able to harness the fact that the other side made a threat to prepare for retaliation. On the other hand, the worst option is to retaliate after both sides have made threats. There is no

³⁴ One caveat to this is the statement by Brophy-Baermann and Conybeare that “routine retaliations are fully discounted by the terrorists and have little effect on the rate of terrorist activity.” (197) This implies that retaliation has to be swift and severe in order to have any deterrent effect. If it is, then terrorists will still prefer not to receive a retaliatory blow.

³⁵ Here I mean a more powerful retaliation than the usual sort described by Brophy-Baermann and Conybeare above.

advantage of surprise here, nor any legitimacy from being threatened without making a threat in advance. Of the other two retaliations, attacking after having made a threat without the other side making a threat is better than attacking having made no threat on either side because making a threat without receiving one in return is a signal that the other side is less willing to combat - lowering the costs of attacking. A surprise attack (M) is more uncertain in terms of returns - potentially higher rewards from hitting first, but because in this node, there is retaliation, potentially higher costs. Of the four options of standing pat, the best is that where the terrorist group makes a threat but none is made by the state. In this case, the terrorist group is able to claim that it has managed to cow the state into submission, single-handedly deterring the state from attacking it. Next best is that where both sides make threats (the deterrence success node), because the terrorist group still manages to show resolve by making the threat in the first place. Of the two where the terrorist group makes no preliminary threat, the status quo node is preferable to the lack of activity after a threat made by the democratic state because refusing to act after a threat from a state would make it appear that the terrorist group itself is cowed by the state, rather than vice versa (node L versus node H). However, assigning values to these eight nodes is difficult. The easiest solution is to design three ordinal sets, which will also yield three different games - one for when the terrorist group is risk-acceptant, one for when the terrorist group is risk-neutral, and one for when the terrorist group is risk-averse. More than likely, the terrorist group will be accepting or neutral toward risk, but all three could exist. In the case where the terrorist group is risk acceptant, those nodes where attack and retaliation occur receive higher values than the standing pat values (13 for I and so forth, 8 for H and so forth). When the terrorist group is risk averse, the reverse will exist (13 for H, 8 for I, and so on). When the terrorist group is risk neutral, I averaged the two potential scores and awarded the average to the node. This meant that there were four pairs of scores - I and H each received a 10, E and D a 9, M and P an 8, and A and L a 7. To summarize, the best option for the terrorist group is to attack without fear of retaliation. The worst is to be attacked without having attacked in advance.

Whether or not attacking and receiving retaliation in return or eschewing action depends on the relative risk acceptance or aversion of the terrorist group.

Deterrence With Credible Threats - A Sequential Model

I first examine the potential effects in a sequential model. This would appear to imply that perfect information exists among the two parties - however, in the real world, this is rarely if ever the case. Here, “perfect information” is meant to mean that both parties receive threats, and attacks occur in sequence rather than at the same time. There is no “retaliatory launch on warning” in this game.

I draw up three sequential models, one for risk neutrality on the part of the religious terrorist group, one for risk aversion, and one for risk acceptance. In the environment where the terrorist group is indifferent to risk, the sixteen possible payoffs are displayed in Appendix B. Four stages of rollback are applied. First, the democratic state decides whether or not to attack, given that the terrorist group has attacked or not. In this case, the state always retaliates if an attack is absorbed, but if an attack is not launched, the state does better by refraining from preemption. As mentioned earlier, if this were a one-shot game, with no chance for a second deterrence environment in the future, preemption might be preferable even to refraining from action. But assuming that either an attack will not wipe out the terrorist group, leaving them able to threaten and attack in the future, or that a preemptive attack will not solve the overall problem which brought about the rise of the terrorist group in the first place, preemption is not a desirable option. Given that the state will always retaliate but never preempt³⁶, there are only eight options left. Now the terrorist group has to decide whether or not to attack in the first place, knowing that if it does attack, it will receive retaliation, but that none will come if it does not attack. Nodes B and H survive as options where no attack occurs, but option I also survives the second rollback as an example of a retaliatory attack. Options M and P also both survive because in this case, with risk neutrality, the payoff to the terrorist group is equal, so there is no preference in rollback. On the third rollback, again one by the democratic state, node D defeats node H, and of

³⁶ We assume that in the sequential game, the state will never move before the terrorist group. The only “pre-emption” can come after a move has been made or not made by the terrorist group.

the three lower nodes, options P and M are both preferable to option I, so that is eliminated as well. In the final rollback, the terrorist group chooses between a payoff of 9 in node D and a payoff of 8 in either M or P. Choosing D, the decision is in fact for deterrence - both states make threats, but neither attacks. Option D also happens to be the social optimum - the total accrued utility of 25 is greater than any other sum of two utilities in the game. In this environment, with credible threats and sequential play, terrorism can in fact be deterred.

In a risk aversion sequential game, much the same occurs. Appendix C shows the game tree here, with the sixteen payoffs listed and labeled as they are in Appendix A, by letter. The first rollback is identical to that in risk neutrality given that the payoffs for the democratic state do not change. The second rollback differs in that option I is eliminated by the terrorist state in favor of option L, and option M is eliminated in favor of option P. In other words, by the end of the second rollback, the only options left (D, H, L, and P) are the four options wherein no conflict occurs. This follows with our assumption that the state prefers to avoid conflict, and that in this case, the terrorist group would rather not take the risk of retaliation. Of these four potential outcomes, the democratic state prefers either the environment where both parties make threats or neither party makes threats - deterrence success or the status quo. And of these two, the terrorist group will prefer to play threat to no threat - option D again emerges and deterrence succeeds.

A note here about the payoffs to the democratic state. It is possible that the status quo ante might be preferable to a deterrence success for a democratic state. This would change the value of D to 15 and the value of P to 16. However, since the democratic state is the second mover instead of the first here, D and P will remain the two viable choices before the last decision on the part of the terrorist group - revaluing these has no effect on this. This is also true when we examine risk neutrality - the final three choices will remain options D, M, and P. But since the terrorist group makes the final rollback as the first mover, it will consistently choose the deterrence success over the *status quo ante*. Whether or not the worst possible payoff for the democratic state is a deterrence failure or an unretaliated surprise attack also has no effect on the

final result. Magnitude has no effect here either. Whether the difference was 100 between two payoffs or one, whether or not the difference included negative integers in the payoff matrix, the difference in payoffs being nonzero was enough to impel the two actors to roll back as they did in this game.

Deterrence is not inevitable in an extended form game between a terrorist group and a democratic state. When the religious terrorist group is considered to be risk acceptant rather than risk averse or risk neutral, choices are made in a far different manner, as Appendix D demonstrates. Again, the first round of rollbacks is the same, the democratic state consistently prefers to retaliate in response to being attacked but to refrain from preemption. Changes emerge in the second rollback. For example, the “deterrence success” in option D is eschewed in favor of attacking first and receiving retaliation (option A). The terrorist group also prefers to attack and receive retaliation throughout - options E, I, and M are the chosen preferences rather than those selected under risk neutrality or risk acceptance. Knowing that the terrorist group is going to attack, and that retaliation will thus follow, the democratic state has to decide whether or not to threaten in the first place. It chooses to threaten if the terrorist group threatens, but not to threaten if the terrorist group does not (options A and M). Of these two, the terrorist group has the luxury of the final rollback, and selects the option wherein neither state makes a threat at first, but both states attack each other (option M). In the case of risk acceptance, the deterrence success formula is still the social optimum, but the two parties choose a socially sub optimal course of action. This option is potentially dangerous, yielding surprise attacks, but with certain retaliation.³⁷

These sequential games demonstrate the potential for deterrence success. As welcome as an environment may be where no threats exist, the game demonstrates that when the terrorist group is risk neutral or risk averse, it will select to make threats, as will the democratic state, but

³⁷ Kilgour and Zagare state that in situations where credibility asymmetries exist, “deterrence of an unsatisfied player is most unlikely.” (Kilgour and Zagare 327) Here I consider this asymmetry in credibility to be a higher risk propensity for the terrorist group (the unsatisfied party) - if the democratic state’s credibility is weaker, the terrorist group is more likely to take the chance on striking first.

nothing will come of these threats. However, when the terrorist group is risk acceptant, no threats are made on either side - but the terrorist group launches a surprise attack, to which the democratic state retaliates. As such, environments where a terrorist group is risk acceptant are more dangerous than those in which it is either neutral or averse. Since we know that democratic states will retaliate to terrorist actions rather than blithely accepting an attack from a terrorist group, if we wish to prevent conflict from breaking out between parties, it is critical to impel terrorist groups to avoid attacking at all costs, which they appear to do in the case of risk acceptance. Such a formula makes conflict inevitable.

Deterrence With Uncertain Actions - A Simultaneous/Sequential Model

The sequential model described above makes sense in an environment where threats are obvious and attacks occur in sequence. However, while threats can be communicated, it is harder to guarantee that decisions to preempt, attack, or retaliate will occur with knowledge of what the other player will do. Appendices B through D showed the full normal form tables with all the potential actions, which would be necessary if both the decision to threaten and the decision to attack were made independently of the other player and without full knowledge of the other player's actions. For simplicity's sake, I assume here that the decision to threaten or not threaten is made sequentially, before the decision to attack or not attack. This leaves us with a series of two-by-two simultaneous play games on the decision to attack or not. In this sort of game, the terrorist group or the state can decide to attack whether the other side has decided or not, allowing for information lags and, more importantly, pre-planned attacks without knowing whether the other side has decided what to do.

Appendix E demonstrates the normal-form games, whether the terrorist group is risk averse, risk neutral, or risk acceptant. I find that whether or not the democratic state chooses to attack preemptively, attack in retaliation, or hold back, the terrorist group has a dominant strategy to attack. This is true whether threats have been made by either side, neither, or both, and hold true whether the terrorist group is risk acceptant, risk neutral, or risk averse. This follows in part from the fact that the terrorist group, no matter the risk level, prefers to avoid

retaliation, and that in general, terrorist groups here prefer the offense. Given that terrorist groups prefer to attack, and since I stated that democratic states would prefer to retaliate against a terrorist attack than to absorb its costs without any benefits from striking back, every single simultaneous game finds a solution where both states combat - the four attack and retaliation nodes from the extensive form games are the four potential solutions, dependent on whether the two states decide to make threats or not.

From this, matrices emerge for the decision whether or not to make a threat. This is a decision not to be made simultaneously, but to be made by the terrorist group, given what will be the expected reaction of the democratic state. For the risk averse terrorist group, if it chooses to threaten first, the democratic state will also choose to threaten. This is the best possible payoff of the four available for the democratic state, but also happens to be the worst possible payoff of the four for the terrorist group. If it chooses not to threaten, the democratic state will also choose not to threaten - this is not as good a payoff for the democratic state, and is not the best for the terrorist group, but since this is a sequential game, it is the best possible payoff, given the other player's decision. In a risk averse environment, the result will be far different from that of a fully sequential game - neither state will make threats, but the terrorist group will execute a surprise attack, and the democratic state will retaliate (node M on Appendix C - payoff of 6 for the terrorist group, and 10 for the democratic state). In a risk acceptant environment, the same is true. If the terrorist group threatens, then the democratic state does as well, the best possible move for the democratic state but the worst for the terrorist group. On the other hand, if there is no threat made by the terrorist group, the state too will not threaten. This being a better payoff for the terrorist group than a situation where both parties are threatening, the terrorist group will elect not to make a threat, and the exact same payoff will result as in the simultaneous play game. When the terrorist group is risk neutral, the dominant strategy to attack stands. When it chooses to threaten, the democratic state will also wish to threaten, and when it elects not to make a threat, the democratic state will do the same. However, when both parties choose not to threaten, the payoff is 8 for the terrorist group and 10 for the democratic state. When both

parties elect to threaten, the payoff is 7 for the terrorist group and 12 for the democratic state (node A in appendix B). The payoff is greater for the democratic state if both threaten, but since the terrorist group is the first mover, she opts not to threaten. Risk propensity has no effect on threats and deterrence in a simultaneous play situation because regardless of the relative risk, the terrorist group has a dominant strategy to attack, and this drives a no-threat environment.

Does this payoff mean that it does not matter whether or not the attacks occur before each other in the case where the terrorist group is more willing to accept risk? Backward induction in the sequential game showed the overpowering desire of the terrorist group to attack - a dominant strategy, so to speak. As such, it does not matter when the attack comes - the terrorist group will still prefer to attack.

The game theoretic model demonstrates the difficulty of sustaining deterrence. It only occurs when the terrorist group is either risk neutral or risk averse, with a fully sequential game. Any time when the terrorist group is risk acceptant - meaning that it prefers to take the chance on attacking the state knowing retaliation is coming rather than accept the payoff for not acting - it will act, and the state will retaliate. If there is a lack of information as to when attacks will happen, even with a clear succession of threats, deterrence will also fail. Even when a religious terrorist group is risk averse, the dominant strategy to attack comes through, no matter what the threat environment is. And given that this is true, when a terrorist group is risk averse, it will elect to execute a surprise attack and invite retaliation. This does not make sense on the surface, given that the terrorist group would prefer to avoid risk. However, this desire is overpowered by a preference for attack. In every case, the terrorist state would do better if it knew that the state would not retaliate. However, not being certain about that, the terrorist group runs the risk of not attacking, and then being attacked, which would be the worst possible outcome. Fearing this, and seeing that the payoff for attacking without retaliation from the state is better than the payoff for holding back - as given earlier - even a risk-averse terrorist group will choose a surprise attack. In a risk-averse environment where both sides make threats, not only is a deterrence success socially optimal, but it is even preferable for the terrorist group (a payoff of 11 versus

only 5). However, the allure of attacking without retaliation, as well as the drawback of not attacking and then being attacked, impels the terrorist group, and following it the state, to both attack. If there was any way to eliminate defection, to guarantee that either both sides act or neither side does, then in both the cases of risk aversion and risk neutrality the terrorist group would choose not to attack. In the case of risk acceptance, the payoff for attacking is still higher than that of standing fast. In this game, however, there are no mechanisms to prevent one party from attacking the other without retribution other than the dynamics of the game itself. The democratic state knows that there are advantages to attacking without being attacked in return, although deterrence is more valuable. And since attacking without being retaliated against is the best possible option for the terrorist state no matter what the level of risk acceptance, it is impossible to eliminate this possibility, and thus, deterrence becomes far more difficult.

Aum Shinrikyo and the Tokyo Subway Attack

Aum Shinrikyo was a risk-acceptant terrorist group. As such, whether or not it planned its attacks independently of the decisions of the Japanese government did not matter. The game predicts that Aum would make a surprise attack on Japan, knowing that retaliation would follow.

The attack executed by Aum had a major terror effect, but did not cause catastrophic casualties or bring about Aum's desired result. It was a failed attack, despite the number of casualties produced - even religious terror has a political end, rather than the simple mass slaughter of civilians.³⁸ Asahara's desire to bring about Armageddon meant that he and his followers would chance retaliation, but in this case, the retaliation was more powerful than the attack. However, the leaders of Aum had believed themselves invincible. Aum was broken as a potent force, although it is reestablishing itself in a different form and Aum sympathizers may remain in other nations.³⁹

Do Aum and the Japanese government fit our models of a religious terror group and a democratic state? Aum is a classic example of a "religious terror" organization. Its center of

³⁸ Stern states that "despite its substantial intellectual, financial, and technological resources... [Aum] failed to carry out the kind of macro terror attacks its leader had envisaged." (Stern 203)

³⁹ *Patterns of Global Terrorism* 91.

gravity is a cult of personality around a mystical leader who offers paradise to his followers. Aum members were prepared for suicide missions, as are many other members of religious terrorist organizations - but Aum was organized along governmental lines - its structure was not along the lines of an autonomous cell-based organization. It could theoretically be deterred. And Japan fit the model of a democratic state. The largest difference was that Aum was an internal terrorist organization. It would have been very difficult to preempt a group like Aum before it acted, making a deterrent posture more attractive for policymakers. As such, the payoff matrix for the two players makes sense, with Japan as a democratic state and Aum Shinrikyo as a risk-acceptant terrorist group.

Aum was a distinctly millenarian organization, lending credence to its label as a risk acceptant terrorist organization. Retaliation was inconsequential, because Aum's members believed that their actions would bring about an apocalypse after which they would move into positions of power.⁴⁰ Apocalyptic terrorism is feared by analysts specifically because it is so difficult to prevent, either through preemption or deterrence.⁴¹ And the decision made by Aum to use weapons of mass destruction demonstrated more than anything else the risk acceptance of the terrorist organization. Aum designed its own chemical weapons, and sources show that they strongly considered the use of biological, radiological and even nuclear weapons. A cell-based organization, autonomous without any sort of hierarchy, would have been hard pressed to develop WMD - it would be possible, but highly difficult, far more difficult for terrorists to do than it was for Aum to do given its scientific expertise. Yet Aum still chose to use weapons of mass destruction - a threshold that no other terrorist group has yet to cross with the sort of scale that Aum used.⁴²

⁴⁰ There has been speculation that the sarin attacks against Tokyo were in fact no mere terrorist attack, but the beginning, in Asahara's mind, of the apocalypse. Metraux 1152.

⁴¹ Dunn 36.

⁴² The Rajneeshee incident in Oregon is the only other significant use of WMD by a terrorist group to date. See Miller, Engelberg and Broad 14-33. Other groups have considered the development of weapons of mass destruction, but no group has managed to execute an attack as Aum did. Aum attempted to acquire nuclear weapons (Stern 204) and developed biological weapons, even though in the cases when they were deployed, there was "no observable effect" (Stern 207).

How, then, does Aum fit into “the game?” My analysis predicts that Aum would choose to execute a surprise attack, knowing that retaliation is imminent. One element of the apocalyptic nature of the Aum manifesto is that it reduces the game to a single play - it is not iterated, and therefore deterrence has no value. If the “end times” are impending, then the future has very little if any value to Aum, and a surprise attack is far more likely than an attack even with a warning in advance. The Japanese government may not believe this, and may see the game as repeated, which would explain the preference for deterrence in its valuation. But Aum is unquestionably risk acceptant. The Tokyo subway attack was not one made in an environment of mutual threat. Aum may have known that the Japanese government would attempt retaliation, but no explicit threats were made to Aum by the Japanese government that retaliation would result from this attack. The belief in the imminent apocalypse meant that threats did not even matter for Aum members. And Aum’s threats to the Japanese government were veiled at best, implicit perhaps, but not received by the government.⁴³ This fits our node (M) where whether the attacks are planned in advance or not, surprise attacks still occur.

It is unlikely, therefore, that Japan could have deterred Aum Shinrikyo. The game shows that deterrence only occurs when the terrorist state is either risk averse or risk neutral, and when the game is clearly sequential, with credible threats made on both sides. There was no history of credible threat on Aum’s part. Similarly, the Japanese government had never acted against Aum, so there was no history on the other side - Aum may have believed that it could “get away” with the attack. Was Aum a “rational actor,” in the sense defined above? It attempted to maximize its own utility, but it may not have factored in the actions of the government. In order to be “rational,” Aum would choose to find its best response given the best response of the other player - here, the Japanese state. Aum happened to do so, but an examination of Aum’s actions does not clearly demonstrate that it acted thinking of what the Japanese government would do. It shrouded its operations in secrecy, lending credence to the idea that it was attempting a surprise

⁴³ If the government had understood the threat from Aum, why was its license as a religious organization not revoked before the attack? The fact that it was not outlawed after the attack reinforces this.

attack. But the decision to operate in secret meant that it was at least somewhat considering the response of the Japanese government. For the above game to apply, Aum would need to operate using some sort of “rules of the game” as described above - otherwise, the game has no explanatory power. Aum clearly preferred a no-retaliation strike without warning, as the values above describe. Its worst possible outcome would be an attack by the Japanese government without an attack coming in advance. And between a no-action policy and an action-retaliation policy, Aum would prefer to attack.⁴⁴ The risk acceptant valuations fit Aum. As for the Japanese government, its best option would be an environment without any sort of attack. Its absolute best option might be a *status quo ante* without threats made on either side, but as noted above, this does not change the outcome of the game. The worst possible outcome for Japan would be an attack by a group such as Aum without any retaliation - it would be politically ruinous and lend a great deal of credibility to the group while destroying the credibility of the government. As for the decision between action-retaliation and preemption, because Aum had not made a move in advance, justifying a preemptive move would be very difficult. On the other hand, it would be easy to justify retaliation, as the Japanese government did moving against Aum after the Tokyo attack. Until Aum made a specific threat against Japan, there was no reason for the government to preempt - action-retaliation is preferable here to preemption. The game has good explanatory power, then, for the actions of both the Japanese government and the religious terror group.

For Japan to deter Aum Shinrikyo, the terrorist group would need to value the future more than it did. If it were not risk-acceptant, it might value the future equally as the present, or perhaps even more so. This would allow a deterrence posture, at the very least for the purpose of marshaling forces for a future attack. But if Aum was risk-acceptant, then what good was the future? No action by the Japanese government could change the risk potential for Aum Shinrikyo here. Shoko Asahara predicted that the apocalyptic third world war would come

⁴⁴ Stern argues that groups like Aum “are unconstrained by fear of government or public backlash.” Stern 228.

between 1999 and 2003⁴⁵ – there was no impetus in waiting to strike. If the Japanese government could make the future more valuable to Aum, or similarly make the present less valuable, then a deterrent posture might exist because Aum would become risk neutral - if the game had no uncertainty as to when the attacks would occur. But there was nothing that the Japanese government could do to change the belief of the members of Aum that the apocalypse was nigh. Even if the future was more valuable, with the uncertainty inherent in when an attack would occur, Aum would still choose to attack, but in a risk-neutral environment with uncertainty, I predict that the same sort of attack would occur. Deterrence is impossible, according to the game, when the terrorist group is risk acceptant. Aum fitting this mold, it is no surprise that they attacked the Tokyo subway as they did, and that Japan retaliated.

Al Qaeda and September 11

The attacks of September 11 demonstrated the devastating impact of modern terrorism. They were not attacks using “weapons of mass destruction,” although they killed more civilians than any other terrorist attack in known history.⁴⁶ Was al Qaeda risk acceptant in the way that Aum was, or risk neutral? It preferred attack over being attacked, to be sure, but existed in a dyadic relationship with the United States wherein threats had been made on both sides, and a history of previous attacks both by al Qaeda on the US and by the US on al Qaeda operations should have created a deterrence framework. Lacking the apocalyptic framework within which Aum operated, al Qaeda was more prepared to bide its time - except that its attacks were planned far in advance. Al Qaeda’s attacks fit the model of a risk neutral terrorist group targeting a democratic state, doing so without a clear delineation between when threats were made and when attacks were launched – but this would be the same model as the risk acceptant actor would follow. I would expect that al Qaeda would attack, and that the US would retaliate, without an advance threat.

⁴⁵ Stern 206.

⁴⁶ Smith labels this the first example of catastrophic terrorism become reality. Smith, Paul J., “Transnational Terrorism and the al Qaeda Model: Confronting New Realities,” *Parameters* Summer 2002: 34. However, if other definitions of terrorism were to be included, the British “terror bombing” of German cities and the American bombing of Japan during World War II outstrip September 11.

Did al Qaeda threaten the attacks which came on September 11? Evidence is still emerging as to whether or not this was the case.⁴⁷ However, threats existed on both sides in that attacks had already occurred. The United States knew that al Qaeda was responsible for the bombing of American embassies in Kenya and Tanzania and the attack on the USS Cole. Al Qaeda had felt American retaliation in the form of cruise missile attacks on the Sudan and Afghanistan, as well as other forms of retaliation both in the Clinton and Bush Administrations. Al Qaeda had made numerous threats against the United States, and the US had made retaliatory threats against al Qaeda. However, these thoughts were not perceived on either side.⁴⁸ The United States had threatened attack before, but its policy options were more often than not impotent. Al Qaeda had made veiled references to attacking the United States – something no foreign terrorist group had done in force before. But American policymakers foresaw nothing like September 11. Al Qaeda may have feared preemption on the part of the United States - American policy had been directed against the group for some time.⁴⁹ If al Qaeda leaders such as bin Laden did not know when the next attack against them might come - a simultaneous decision game - my analysis predicts that they would choose to attack, even though this would guarantee retaliation. Al Qaeda followed the model.

Risk propensity, on the other hand, is questionable. The group was clearly not risk averse - even though in the game with uncertainty of action, they would have still chosen to act. While the game fits al Qaeda as a risk-neutral player, was this the case? Certain actions taken by al Qaeda show that it was if not entirely risk-neutral, it was at the very least more risk-neutral than a group such as Aum Shinrikyo. First, there was no impending apocalypse in the minds of al Qaeda leaders and fighters. They were not attempting to bring about the “end times,” but rather

⁴⁷ Warnings had been made about the rise of so-called “catastrophic terrorism” (see Carter, Ashton, et al, “Catastrophic Terrorism: Tackling The New Danger,” *Foreign Affairs* 77 (November/December 1998), 80. In addition, al Qaeda was responsible for previous attacks on airliners and plots such as “Oplan Bojinka” (Smith 33). FBI Director Robert Mueller admitted that there were warning signs present that al Qaeda might launch the September 11 attacks in advance of that date. See Lewis, Neil A., “F.B.I. Chief Admits 9/11 Might Have Been Headed Off,” *The New York Times* 30 May 2002.

⁴⁸ Risen, James, and Stephen Engelberg, “Failure to Heed Signs of Change in Terror Goals,” *The New York Times* 14 October 2001.

⁴⁹ Risen, “US Pursued Secret Efforts to Catch or Kill Bin Laden.”

aiming to cripple the United States in order to give them greater freedom of action in bringing about a fundamentalist state in Saudi Arabia and driving Israel from the Middle East. This action was not taken in order to meet a rigid deadline. September 11 could have happened in 2000 (had the planning begun earlier) and it could have occurred later than it did.

Al Qaeda has yet to deploy weapons of mass destruction - a major norm to violate. Airliners have been labeled by many as “weapons of mass destruction.” But how does the hijacking of airliners and using them as suicide bombs differ in a qualitative manner from the use of suicide bombing trucks in Lebanon in 1983? Airliners were simply a more potent tool, quantitatively more powerful but qualitatively not as great a difference as the use by Aum of sarin gas in Tokyo. Al Qaeda still has not chosen to cross the “weapons of mass destruction Rubicon.” It has expressed great interest in procuring radiological material, and has experimented with cyanide gas among other options.⁵⁰ But as of now it has not designed a deliverable system. The reaction of the international community to the use of weapons of mass destruction is far greater than to “simple” terrorism, as destructive as it can be. If al Qaeda were to execute a terrorist attack using a weapon of mass destruction, it would no longer be risk-neutral, but rather risk-acceptant, knowing that retaliation would be far greater. In addition, possession of a weapon of mass destruction, from a terrorist perspective, might lend greater utility to attacking and absorbing retaliation than holding tense in a deterrent posture. Threats involving weapons of mass destruction would be more “credible” than simple conventional threats. However, what state would allow a terrorist group to hold weapons of mass destruction? The incentive for preventive or preemptive attack on the part of a democratic state such as the United States might be irresistible, creating a “use ‘em or lose ‘em” environment for the terrorist state. Use of a weapon of mass destruction would be devastating, perhaps even more so than the potential retaliation on the part of a democratic state. This is especially true in the case of a group such as al Qaeda spread across multiple countries, many of whom do not wish to have al Qaeda sympathizers within their borders. Could the US respond in kind to an al Qaeda

⁵⁰ Bergen interview.

radiological attack? How? Before Operation Enduring Freedom, the US could perhaps threaten the Taliban regime with a weapon of mass destruction, but this threat is not necessarily credible. Now, with Afghanistan “subdued” and the Taliban ousted from power, how would the United States be able to retaliate against an al Qaeda WMD attack? The only real means of retaliation would be preemption - driving a terrorist group such as al Qaeda to use the weapon.

Al Qaeda with a weapon of mass destruction fits the payoff structure for a risk acceptant state - the best option being attack without retaliation, the worst being an attack from the state in question without a previous attack, and preferring attack with retaliation to standing fast. However, what of al Qaeda as of September 10, or September 11, 2000? Attack without retaliation would still be the best option, and being attacked without having attacked first the worst. However, the choice between attack bringing retaliation and abstaining from attack is murkier. This is not a single-shot game - even in the wake of September 11 warnings still come in nearly every day of imminent terrorist attacks, and this after a major American retaliatory response.⁵¹ Al Qaeda could have benefited from refraining from attacking. It would have been far more difficult for the United States to justify retaliation - yes, al Qaeda had bombed embassies and targeted a US warship, but the US had already attempted retaliation in its cruise missile attacks and other covert actions. One reason why bin Laden might have been tempted to prefer attacks with retaliation versus standing pat was that the American retaliations had not made a major dent in his operations. However, from a sequential play perspective, it is safe to say that bin Laden did not prefer attack and retaliation as greatly as a risk acceptant group such as Aum Shinrikyo. Attack and retaliation might give him some leverage with the people of the Middle East, but a devastating American attack such as that which an attack on New York and Washington would provoke, especially with a more hawkish American administration, might be too devastating. Any sort of attack carries with it the potential for failure. And there were benefits to bin Laden for waiting - more time to consolidate power bases, allowing the United

⁵¹ *Patterns of Global Terrorism* 105: “Some al Qaida members at large probably will attempt to carry out future attacks against US interests.”

States despite the mutual threat environment to be lulled into a false sense of security, and striking in the future when the time might be more appealing. As such, it is a fair assumption to say that al Qaeda valued waiting, getting no benefits but incurring no costs equally to the benefits of attack with the costs of retaliation – perhaps risk neutrality, not risk aversion, perhaps a mild form of risk acceptance but not on the same level as that of Aum Shinrikyo.

The United States fits the model of a democratic state here. The best option for the US would be one where no attack occurred - and this in an environment where threats had already been made on both sides. *Status quo ante* was impossible for the US. The worst for the US would be an attack from which there would be no response. Here, preemption might be more attractive for the US given that threats had already been made by al Qaeda, but mobilizing political support behind such an action might be impossible.⁵² In addition, to preempt would provoke an immediate reaction from al Qaeda in a multiple-play game, and this was not a single-shot game. As such, retaliating to an attack, despite the dangers inherent therein, is preferable for the US to wait, because putting a high value on preemption would make an attack more likely - and the US would prefer to avoid an attack if at all possible.⁵³

If al Qaeda was risk neutral, why was it not deterred? If the extended form sequential game held true, then al Qaeda should have preferred refraining from action rather than attacking and being attacked in return. However, this only exists in a clearly delineated sequential game. If al Qaeda and the United States do not know if the other side is going to act, al Qaeda will elect to act - it has a dominant strategy in a simultaneous game, whether threatened or not, to attack. Al Qaeda would choose to attack without making clear, credible threats. This fits the model of the game, and makes a certain amount of sense given the situation in 2001. But could al Qaeda have been deterred from attacking the US? From a theoretical standpoint, the only way to deter

⁵² It is true that in 1996, presidential pollster Dick Morris showed President Clinton figures arguing that the American public would support a war against terrorism - but Clinton decided against such an operation. See Miller, "Many Say U.S. Planned for Terror but Failed to Take Action."

⁵³ It is important to note that the United States is not the only actor in the struggle against al Qaeda. For example, one report states that the Saudi government had dispatched assassins against bin Laden as early as the first Bush Administration. Weaver, "Blowback" 36.

al Qaeda would have been to transform the game into a sequential game, where al Qaeda and the United States would have known of the other's intentions to strike. This may be possible, but would be remarkably difficult, and would require the United States to wait until al Qaeda had clearly decided whether to or not to attack before deciding to retaliate or preempt. Otherwise, if they may be acting at the same time, the dominant strategy stands.

Reflexive Deterrence

An idea to consider is whether or not deterrence herein can be a one-way street. Can Japan deter Aum Shinrikyo without Aum deterring Japan? Such an asymmetry may be problematic. It would be the ideal for the states in question - no restriction on action, no fear of terrorist action, and if desirable, the option of eliminating the "terrorist menace" remains open. However attractive this may prove from a political perspective, from a theoretical perspective it is troublesome. If one actor deters another, but there is no deterrence in the other direction, the actor being "deterred" may decide to take the chance. An example in nuclear arms: let us imagine a world where India has a secure second-strike capability against Pakistan, through the procurement of missile submarines, hardened silos with solid-fuel ballistic missiles, or some other stable delivery system. But let us also imagine that due to some reason or another, Pakistan does not have a secure second-strike capability against India. In such an environment, to be sure, Pakistan is deterred by India, but India would not be similarly deterred against Pakistan. In these sorts of cases, India might be tempted to make a first strike against Pakistan in order to eliminate any sort of "nuclear menace." Similarly, Pakistan may be tempted to make a first strike against India in a "use 'em or lose 'em" environment where preemption is necessary in order to have any sort of nuclear force structure. This extended metaphor applies to the terrorism case as well. Let us imagine an environment wherein Aum Shinrikyo is deterred by threats from the Japanese government. But at the same time, let us say that Japan is not similarly deterred by Aum. What is the result? Japan has a remarkable freedom of action vis a vis Aum, and the government may convince itself that it would be better to remove the potential problem of Aum by criminal or paramilitary prosecution. Conversely, if Aum found itself in a position

incapable of deterring the Japanese government from taking action against it, but “deterred” by Japanese threats, what would be the incentive of standing fast? Assuming relatively perfect information, Aum leaders could tell that Japan would have an incentive to target them. Knowing that this was coming, suicide might be preferable to dishonor - and religious terror groups such as Aum and al Qaeda have shown no hesitation in seeking martyrdom for a greater good.

This idea of mutual or “reflexive” deterrence, that deterrence here will only succeed when both sides can deter each other from action, is familiar to students of nuclear policy in the Cold War and since, but is uncomfortable to those who see terrorism as illegitimate, some sort of scourge plaguing mankind. To be deterred by terrorists grants them a certain legitimacy, recognizing their right to survive rather than seeking to wipe them out. President Bush’s “war on terror” would not recognize this deterrence as a positive goal. However, how can deterrence survive as a one-way street? Morgan discusses the idea of “unilateral deterrence,” but he states that such a stance conflicts with the actor’s desire to avoid immediate deterrence (unilateral deterrence being viewed in the general sense in Morgan’s analysis), as well as a desire to avoid war. A one-way deterrence policy, in Morgan’s words, “prepares a policy option that fades in appeal just when it might be needed.”⁵⁴ Therefore, a state will not be able to deter a terrorist group without that terrorist group somehow deterring the state from attacking it.

Credibility

My model demonstrates the possibility as well as the difficulty in deterring a religious terrorist group. The only way in which to do so is to for the second actor, here the democratic state, to signal that it will not act until after the terrorist group chooses to act. If the democratic state renounces any chance at the initiative, then and only then is the game truly sequential, at which point a risk neutral or risk averse terrorist group should come to a deterrent posture with a democratic state.

Is it possible for a democratic state to signal in this manner? It would require an implicit recognition of the terrorist group, taking a public or at least communicated stance that it will not

⁵⁴ Morgan 92.

take the initiative - this would alter the perception of what a terrorist group is.⁵⁵ Renouncing the initiative, similar to a no-first-use policy in a dyadic nuclear confrontation, would demonstrate to the terrorist group that it will not be preempted, and will only retaliate to a terrorist attack. This opens up a difficult issue from a political perspective; holding the citizens of a democratic state hostage. In the nuclear era, the American people were held hostage by the Soviet nuclear deterrent, just as the Soviet population was held hostage by the American force. This “stable balance of terror” was designed because nuclear weapons were capable of inflicting unacceptable damage on the other nation’s population and territory, to the point where the mere threat of annihilation would deter the other state from attacking first.⁵⁶ Even in this case, there was a great deal of uncertainty as to what level of destruction was necessary for a minimum deterrent, and whether or not to target warfighting material rather than mere population centers.

If nuclear deterrence worked in the Cold War, it worked for two reasons which are not necessarily present in this relationship between a democratic state and a terrorist organization: the credible means of delivering an absolutely devastating response to bear, one against which there is no defense; and an area to be targeted of value to the other state. Addressing the latter first, one of the greatest problems in deterring terrorist groups is that they are not tied to a single state. Al Qaeda was based in Afghanistan for the most part, but maintains cells worldwide. Aum Shinrikyo was primarily a Japanese organization, but had offices in New York and Moscow. Where, then, does a state target? The one element which can be targeted which is of value to the organization, at least in the case of organizations like these, is leadership. Both al Qaeda and Aum Shinrikyo, among other groups of a similar persuasion, are groups with a somewhat corporate style of management. There is one undisputed leader and a hierarchy. Al Qaeda might be capable of limited autonomous attacks, as might Aum, but for something on the

⁵⁵ Howard notes that this would “accord terrorists a status and dignity that they seek and that they do not deserve. It confers on them [terrorists] a kind of legitimacy.” Howard 8.

⁵⁶ Pape, Robert A., *Bombing to Win* (Ithaca: Cornell University Press, 1996) 20 notes that “nuclear threats raise the prospect of so much harm that they can coerce without being fully implemented.”

scale of the Tokyo subway attack or September 11, extensive coordination is necessary.⁵⁷ The problem with targeting the leadership in these circumstances is that they may not be averse to their own deaths. Bin Laden and Asahara both demonstrated a willingness to be martyred for their causes. Would the threat of eliminating the leadership, in those cases, serve as a deterrent? Perhaps. While the leaders of groups such as Aum and al Qaeda have demonstrated a willingness to be martyred, they may be willing to die in retaliation for their actions, but not beforehand.⁵⁸ It is here where the threat of retaliation on the part of the democratic state has some validity. There is always a veiled element of chance, even in the fully sequential game, that the democratic state would preempt.⁵⁹ Highly unlikely as it may be, the chance remains. In addition, as long as the “game” is not a single shot, the terrorist leader has something to live for - the chance to execute more attacks. Asahara may have been prepared to die because in his mind, there was an endgame and thus he did not need to live on to execute other attacks.⁶⁰ As long as there is no endgame, however, deterrence can succeed. This is the case in any deterrence environment - if a prisoner’s dilemma or similar situation exists and an endgame is introduced, there is an incentive to defect on the last play of the game. If one player chooses to defect on the last play, the other player will defect on the play before, and so on, to the point where defection occurs at the beginning of the game - defection here meaning attacking the other side. Aum could not be deterred, among other reasons, because it existed in a single-shot dynamic, believing that a move such as the Tokyo subway attack would be the final move in the game.

⁵⁷ Smith argues that in some respects, “al Qaeda acted in a manner somewhat resembling a large charity organization that funded terrorist projects to be conducted by preexisting or affiliate terrorist groups.” However, he also notes that bin Laden approved large-scale actions, such as September 11. Smith 36. For more on the potential autonomous actions of members of terrorist groups, with regards to Mohammed Atta, see Risen and Engelberg, *New York Times*.

⁵⁸ Dunn notes also that in the case of groups such as Hamas and Hezbollah, “Though prepared to recruit and use suicide bombers, those leaders give no suggestion of having a death wish themselves. For them, deterrence could conceivably be brought to bear.” Dunn 36.

⁵⁹ The only way in which a democratic state could “preempt” in this game would be if the terrorist group decided not to move, and signaled that its move was complete. At that point in the fully sequential game, the democratic state could make a move to act even though the terrorist group would have demonstrated inaction. However, since the timing of attacks is uncertain, it is never sure when the terrorist group’s move is complete - making preemption in the sequential game far more difficult.

⁶⁰ Asahara also believed that he would survive the imminent Armageddon to lead Japan, and the world. Stern 206.

But how to execute these sorts of deterrent threats? Do democracies possess the means to deter a terrorist group? It is necessary to delve into the earlier issue, the question of how to deliver a devastating, credible response to an action taken by the other group. Terrorist groups have demonstrated the ability to deliver a devastating response to an action on the part of a democratic state. However, I have set up this analysis with the terrorist group as the “first mover,” which means that the democratic state needs to be able to deliver a devastating response to an action on the part of a democratic state. Some democratic states such as the US possess weapons of unimaginable power. But what use are these against terrorists? Is Osama bin Laden cowed by the American nuclear stockpile? Because the only target which holds deterrent power is the leadership of a terrorist group, the use of a weapon of mass destruction would be for lack of a better word, impossible. The current American stockpile is too powerful to be used against individual human targets without significant collateral damage being inflicted. Bin Laden would more than likely not be deterred from attacking New York with a nuclear weapon by the threat of a nuclear weapon delivered on Taliban Kabul.⁶¹ It is not credible for a democratic state to threaten innocents for the actions of a non-national terrorist group. If Aum were to deliver a more deadly chemical, biological, or nuclear strike on Japan, would the Japanese government retaliate with weapons of mass destruction on its own soil? The answer is no. So what sort of conventional strikes could a democratic state deliver against the leadership of a terrorist group - what sort of attacks, more importantly, when threatened would be credible enough to deter a terrorist attack? The assassination of terrorist leaders is one potential option. But if they were to be assassinated in retaliation for attacks, would this have a deterrent effect, or create martyrs? Cases such as those in the Middle East are unclear. And it may be difficult for a democracy to authorize the preemptive targeting of leaders in a terrorist group for assassination before an attack can be launched. But it is possible. In an environment where terrorists have made a first threat, the retaliatory threat on the part of the state may be targeting of the leadership - but again,

⁶¹ Prof. Robert Jervis has suggested one possible method of deterring al Qaeda - target Mecca with nuclear weapons. This might deter bin Laden from acting, if the territory is valuable enough to him - which one would assume it is - but the credibility of such a threat would be slim to nil given the political ramifications.

this is far more credible as a retaliatory threat than as a preemptive threat, even in a mutually tense environment. The impact of the threat will then depend on the ability of the state to execute the threat - intelligence, paramilitary, criminal justice and political resources; the willingness of the state to execute the threat; and the impact which such a threat will have on the leadership of a terrorist group. Osama bin Laden is less likely to be deterred than Yasser Arafat, but bin Laden is more likely to be deterred than Shoko Asahara, even though all three have demonstrated a willingness to accept martyrdom.

If these threats can be communicated, is it also possible that these threats can backfire, creating a security spiral instead of a deterrence environment?⁶² A stable deterrent, according to Huth, prevents the fear of an offensive strike by the “defender” (here assumed to be the democratic state, since the terrorist group is the first actor) and allows the attacking side to back down when necessary.⁶³ The threat of assassination, for example, is a potent retaliatory threat - but it is also a welcome tool in terms of preemption. Assassination policy requires forces available on station, shadowing the leaders of terrorist groups - so when to pull the trigger? It might be believable for a democratic state rather than an autocratic state to declare that it will only strike in retaliation - but if strikes only come in retaliation, does the power of the threat subside because of the willingness of leaders to accept martyrdom after an attack? This is true if the group is risk acceptant, but if the group is risk neutral, the leader should be indifferent between standing fast and attacking with retaliation - which should lend some power to the threat. When it is uncertain whether or not an attack will come from the democratic state - this assassination attempt, for example - the spiral model fits in the simultaneous game described above, and an attack will come from the terrorist group no matter the risk propensity. The only way to move out of this spiral is to transform the game from simultaneous to sequential, which increase the flow of information and more closely approximates perfect information. In addition, the attack will come without previous threat according to this game, increasing the threat of

⁶² For an analysis of spiraling, see Jervis, Robert, *Perception and Misperception in International Politics* (Princeton: Princeton University Press, 1976) 58-113.

⁶³ Huth, Paul K., *Extended Deterrence and the Prevention of War* (New Haven: Yale University Press, 1988) 11.

conflict since there would be no clear warning of an attack. But at the same time, if the state does not act, this may be a signal to the terrorist group that it will not react, prompting a strike.⁶⁴ But how to avoid this spiral? Explicit threats which state that retaliation will be swift and sure but that preemption will not happen may prevent this spiral, even though the preparations for such retaliation will tempt terrorist groups to believe that the game may be simultaneous rather than sequential. There is no perfect way to break out of the spiral, although democratic states can attempt to do so through the form of the threats made. However, this eliminates the option of preemption, which may be politically attractive for states.

Policy Impact

From a theoretical perspective, deterrence of a terrorist group is possible, although exceedingly difficult. Is it possible in practice? I believe that it would require a reorientation in how states view terrorist groups, no longer as criminal elements with no right to exist, but rather as enemy actors in the international system against whom threats must be made, but against whom preemption is no longer a real option. This assumes that states wish to deter terrorism, which may not be true either. Not all policymakers accept deterrence logic, and may prefer to run the chance of absorbing an attack if it is possible to eliminate the terrorist threat rather than deter it. This also assumes that terrorist groups exist which can be deterred - that not all terrorist groups are risk acceptant.

For the United States, Japan, or any other democratic state to deter a terrorist threat, a firm policy is necessary, hand in hand with an acceptance that terrorism is a permanent phenomenon and a permanent threat. If terrorism is not permanent, then there is an endgame in the dyadic relationship between a democratic state and a terrorist group - which means that there is little if any incentive for either party to hold back. If, however, a state is willing to recognize that a terrorist group is a permanent fixture in its threat environment, it can make threats which have a deterrent nature. The United States cannot deter al Qaeda by threatening retaliation if it is

⁶⁴ Huth 12.

simultaneously attempting to root it out and eliminate it.⁶⁵ These actions transform the game into a simultaneous one instead of a pure sequential one, and the payoffs in a simultaneous game favor attack.

In addition, there are qualms in states such as the United States about allowing the assassination of foreign nationals. An executive order in the US since 1976 has prohibited any employee of the United States government from engaging in “political assassination,” although a House bill proposed by Rep. Bob Barr in January 2001 called for the repeal of this prohibition.⁶⁶ If assassination is allowed in a deterrent framework, the best way to implement it would be in the guise of a “no first use” policy - where assassination will not be used against terrorists before they commit actions, but if they do, then assassination will be considered a means of retaliation. Such a policy may have deterrent ramifications. An executive order can be overturned by another executive order; however, a bill such as Barr’s, with the specific limitation on the use of assassination as a retaliatory threat rather than as a preemptive threat, could act as a public signal to terrorist groups that the United States will strike against what is considered valuable.⁶⁷

However, this may not be desired by the United States or other democratic states because deterrence in and of itself may be considered impossible for political reasons. During the Cold War, nuclear deterrence was opposed by some members of the military, as well as members of the political establishment in the Reagan Administration, closely linked to the present American government. A deterrence policy would require the terrorist group to strike first, which may be

⁶⁵ To do so would be inviting attack by rearranging the game into one where the state becomes the first actor in terms of making attack decisions. This would rearrange the final payoffs in terms of rollback, and since the state in the game here has a vested interest in deterrence, while the terrorist group does not, the chances of successful deterrence are nil.

⁶⁶ Executive Order 11905, sec. 5 (g); the House bill, tellingly titled the “Terrorist *Elimination* Act of 2001” (emphasis mine) is H.R. 19, introduced 3 January 2001 and referred to the House Committee on International Relations. No further action on the bill appears to have been taken since. Deutsch and Smith state that this is unnecessary because in military operations, individual political and military leaders can be targeted without violating the executive order. Deutsch, John, and Jeffrey H. Smith, “Smarter Intelligence,” *Foreign Policy* (January/February 2002): 68.

⁶⁷ Smith uses assassination policy as means of combating terrorism, but he differs from my analysis by calling for preemptive assassinations rather than retaliatory strikes (Smith 43-44). Even in a preemptive manner (and perhaps even more so because of the moral dilemmas therein), assassination is a difficult policy for democratic states to adopt, although some such as Israel have justified it.

untenable for the government of a democratic state, especially after the damage absorbed by the United States on September 11. Even attempts to arrest terrorist leaders before they act might be a preemptive act, and would serve to undermine the deterrence framework. It also requires that terrorists be seen as a military rather than a criminal threat - deterring crime may be possible, but deterring terrorist actions requires a different level of threat. Terrorist leaders may fear for their own lives, but may find the threat of arrest and extradition, especially to a democratic state such as those in Europe which lack the death penalty, a far weaker threat. And the transnational nature of terrorist threats means that terrorists can flee to countries which may not allow for extradition. This question of the non-national nature of terrorism complicates assassination policy as well. For example, imagine a terrorist group whose leader is in hiding in a European state, but is threatening the United States. If that terrorist attacked, would that European state sanction an American assassination attempt on the terrorist leader? And what of domestic terrorism?

Any discussion of terrorism policy on the part of a democratic state includes the issue of civil liberties. Deutsch and Smith note that heightened vigilance will be necessary in order to track suspected terrorists, although they also argue that a system can be built “to collect large amounts of information without compromising the privacy and rights of American citizens.”⁶⁸ And former Israeli Prime Minister Benjamin Netanyahu argues the idea “that civil liberties should sometimes be limited not only at the point when physical violence is actually being perpetrated against others but also when such action is being incited, planned, and organized.”⁶⁹ These are valid points in terms of retaliating against terrorism, but have much less value in terms of deterring it. While border controls and the like are critical in terms of domestic security, the sort of deterrence presented here is deterrence by punishment, not deterrence by denial. The latter is more of a defensive posture, and would require some changes in the relative value of civil liberties. One of the attractive elements of a deterrence posture as laid out here is that it

⁶⁸ Deutsch and Smith 68.

⁶⁹ Netanyahu, Benjamin, *Fighting Terrorism* (New York: Farrar Straus Giroux, 1995) 50.

requires fewer violations of civil liberties. It does leave the general population at risk, which may be politically untenable. But it does not require any sort of draconian security measures as deterrence by denial, or defense against terrorism, might. Some defensive measures would be welcome in terms of changing the payoff structure for the terrorist group - better defenses reduce the payoff for attack versus standing fast, which may impel both parties into a deterrence posture - but the power of a deterrence policy is its reliance on threats rather than the ability to deny the enemy the ability to inflict unacceptable damage.

Because of the transnational nature of terrorism, a certain degree of multilateral action is necessary. Howard notes the Bush Administration's coalition building, which was a critical element in designing the operation against Afghanistan.⁷⁰ And Flynn highlights the need for a global infrastructure against terror.⁷¹ However, some of these recommendations are defensive. If an assassination policy, for example, is to be used in deterring a terrorist group, international cooperation may be necessary - and may not be forthcoming. A terrorist group with multiple safe havens may be able to defect from the deterrence solution because it would become increasingly impossible to target the leadership of said group. However, international cooperation is possible, and even a state such as Sudan was willing to expel bin Laden and al Qaeda when pressured to do so by the United States.

Religious terrorism can be deterred. From a policy perspective, it may be unattractive, or at least less attractive than preemption or defense. From a theoretical perspective, the possibility of having a deterrence relationship is limited to situations where the terrorist group is either risk neutral or risk averse, and where the game is clearly sequential. Any deviations from those criteria, and deterrence does not exist. However, within those limitations, the potential for deterrence does exist. This augurs well for states with other terrorist problems, because the types of terrorist organizations analyzed here are among the hardest to deter, and democratic states

⁷⁰ Howard 8.

⁷¹ Flynn, Stephen E., "America the Vulnerable" *Foreign Affairs* 81:1 (January/February 2002).

have a greater difficulty in conveying credible deterrent threats than non-democracies. A state should be able to deter any terrorist group that has a clear hierarchical structure and is either risk neutral or risk averse, assuming that the relationship between the two parties is strictly sequential. For example, the al Aqsa Martyrs' Brigades in the Holy Land may be considered a risk acceptant actor, which would deny any chance for a deterrent policy on the part of the Israelis. On the other hand, Fatah might prove to be risk neutral. If this is the case, then a deterrence framework could be designed. Another example is Northern Ireland. The Real IRA is one of the most feared terrorist organizations in the world – but is it risk acceptant, or is it perhaps risk neutral? Discerning whether a terrorist group is risk neutral or risk acceptant is very difficult, to be sure, and can have dangerous ramifications. But this is a problem in any sort of deterrence calculation. British policymakers for the most part miscalculated in judging Hitler in the 1930s, believing him to be risk neutral if not risk averse when in fact he was risk acceptant. World War II, to some extent, was a result. It might be easier to simply assume that all terrorist groups are risk acceptant. Many people believe this. But according to the model designed here, believing this also denies any chance for deterrence to be an effective element of foreign policy. It is difficult to prove any deterrence success. Causation is always questionable, and any effect could follow from a myriad of causes. And actors have an incentive to bluff as to the effect of the deterrent threat, because an admission of the power of a deterrent threat would shift the power balance in the direction of the actor making the threats. This model here is imperfect – it is not generalized, and it does not capture every terrorism case. But it does offer the potential for a new and effective foreign policy tool, as well as an extension of deterrence logic to include non-state actors. The model and the cases here demonstrate that in the most difficult of circumstances, with a state handicapped in terms of wrestling with credible threats and with a terrorist group animated by objectives which may not appear pragmatic, deterrence is still a possibility – not a probability without an active engagement by the state, but at the very least, a possibility, another method to protect “innocent” civilians, even if this protection does come under a proverbial sword of Damocles.

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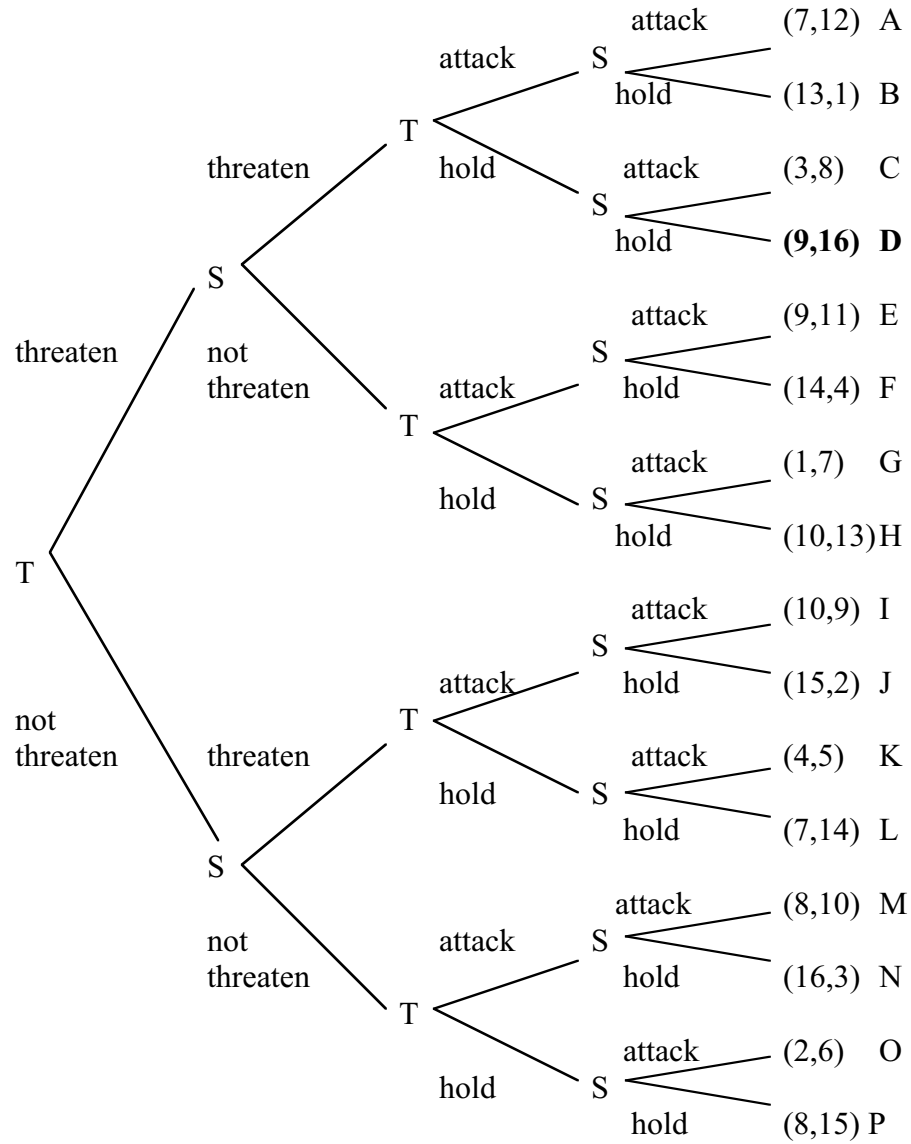
Appendix A

- A: The terrorist group makes a threat to the state, and the state makes a retaliatory threat. The terrorist group chooses to attack the state, and the state retaliates. Scored a 12 for the democratic state, a 7 for the risk-neutral terrorist group, a 9 for the risk-acceptant terrorist group, and a 5 for the risk-averse terrorist group.
- B: The terrorist group and the state make complementary threats, the terrorist group attacks, but the state does not retaliate. A 1 for the democratic state (ultimate deterrence failure), and a 13 for the terrorist group.
- C: Both states make threats, but the terrorist group chooses not to attack - yet the state still attacks. An 8 for the state, and a 3 for the terrorist group.
- D: The deterrence success node. Both states make threats, and neither state attacks. A 16 (ultimate deterrence success) for the democratic state, a 9 for the risk-neutral terrorist group, an 11 for the risk-averse terrorist group, and a 7 for the risk-acceptant terrorist group.
- E: The terrorist group makes a threat, but the state does not respond with one. The terrorist group attacks, and the state retaliates. An 11 for the state, a 9 for the risk-neutral terrorist group, a 7 for the risk-averse terrorist group, and an 11 for the risk-acceptant group.
- F: The terrorist group makes a threat, the state does not respond, the terrorist group attacks, and the state does not respond. A 4 for the state, and a 14 for the terrorist group.
- G: The terrorist group makes a threat, the state does not respond with one, the terrorist group does not attack, but the state does. A 7 for the state, and a 1 (worst possible outcome) for the terrorist group.
- H: The terrorist group makes a threat, but there is no retaliatory threat, and neither actor takes action. A 13 for the democratic state, a 10 for the risk-neutral terrorist group, a 12 for the risk-averse terrorist group, and an 8 for the risk-acceptant terrorist group.
- I: The terrorist group makes no threat, but the state does make a threat. The terrorist group attacks, and the state retaliates. A 9 for the state, a 10 for the risk-neutral terrorist group, a 12 for the risk-acceptant group and an 8 for the risk-averse group.
- J: The terrorist group makes no threat, but the state does. The terrorist group attacks, and the state does not retaliate. 2 for the state, 15 for the terrorist group.
- K: The terrorist group makes no threat, but the state does. There is no attack by the terrorist group, but the state still attacks the terrorist group. A 5 for the state, and a 4 for the terrorist group.

- L: No threat from the terrorist group, but the state does threaten. No attack from the terrorist group or the state. A 14 for the state, a 7 for the risk-neutral terrorist group, a 9 for the risk-averse terrorist group and a 5 for the risk-acceptant terrorist group.
- M: No threat on the part of either the terrorist group or the state. The terrorist group still attacks, and the state retaliates. A 10 for the state, an 8 for the risk-neutral terrorist group, a 6 for the risk-averse terrorist group, and a 10 for the risk-acceptant terrorist group.
- N: No threat from either the terrorist group or the state, but the terrorist group does attack - yet the state does not retaliate. This is the optimum for the terrorist group (a 16), and a 3 for the state.
- O: No threat on the part of either the state or the terrorist group, and the terrorist group does not attack the state - but the state attacks the terrorist group. A 6 for the state, and a 2 for the terrorist group.
- P: No threat from either the state or the terrorist group, and neither side takes action - *status quo ante bellum*. This is a 15 for the state, an 8 for the risk-neutral terrorist group, a 10 for the risk-averse terrorist group, and a 6 for the risk-acceptant terrorist group.

APPENDIX B

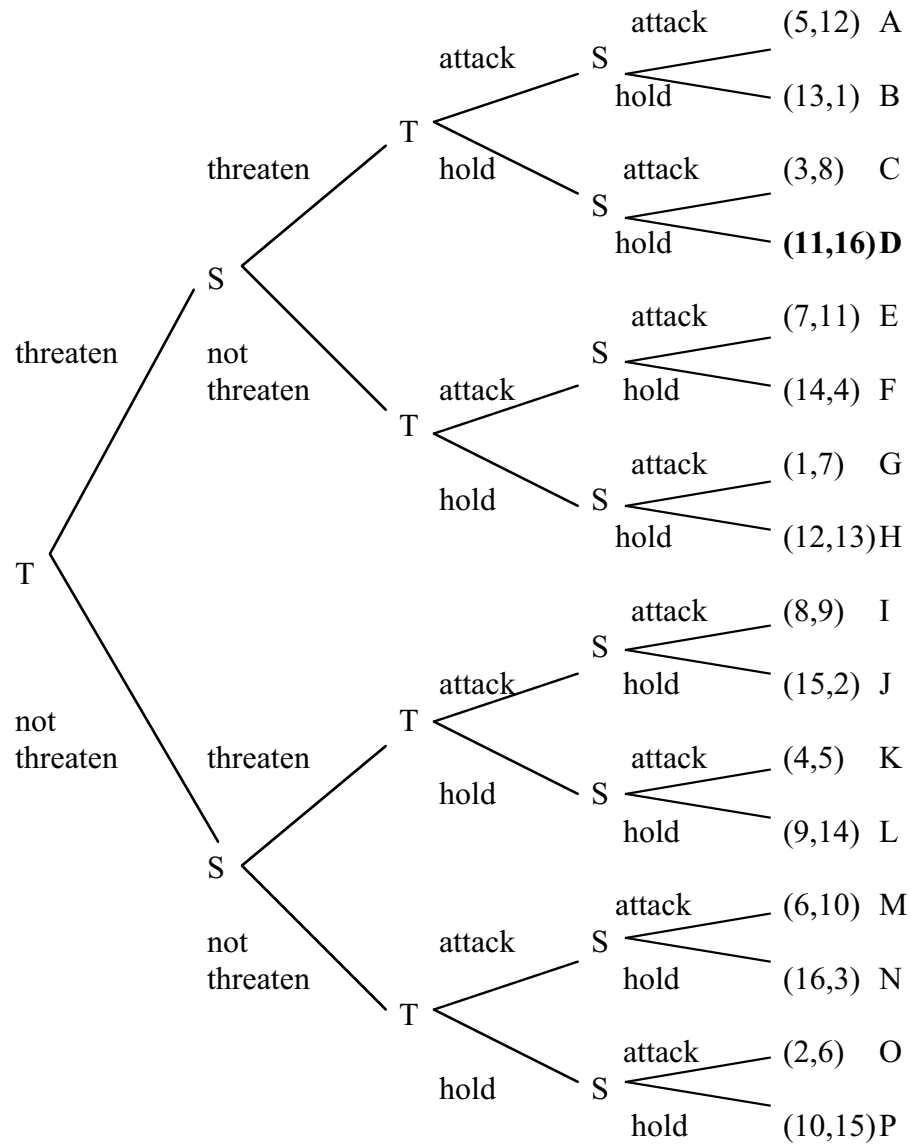
Risk-Neutral Terrorist Group



	Democratic State (S)				
Terrorist Group (T)		Threaten/Attack	Threaten/Not Attack	Not Threaten/Attack	Not Threaten/Not Attack
	Threaten/Attack	7,12	13,1	9,11	14,4
	Threaten/Not Attack	3,8	9,16	1,7	10,13
	Not Threaten/Attack	10,7	15,2	8,10	16,3
	Not Threaten/Not Attack	4,5	7,14	2,6	8,15

APPENDIX C

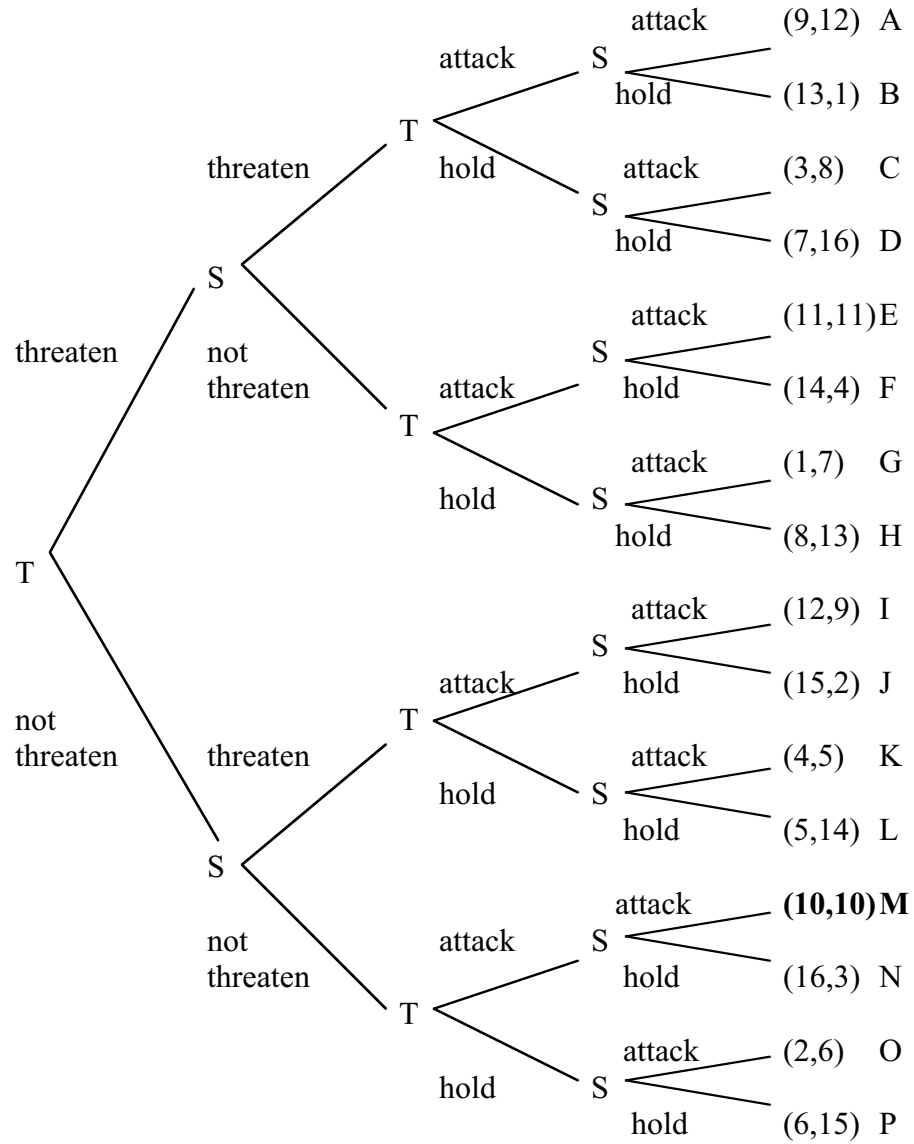
Risk-Averse Terrorist Group



Terrorist Group (T)	Democratic State (S)				
		Threaten/Attack	Threaten/Not Attack	Not Threaten/Attack	Not Threaten/Not Attack
	Threaten/Attack	5,12	13,1	7,11	14,4
	Threaten/Not Attack	3,8	11,16	1,7	12,13
	Not Threaten/Attack	8,9	15,2	6,10	16,3
	Not Threaten/Not Attack	4,5	9,14	2,6	10,15

APPENDIX D

Risk-Acceptant Terrorist Group



	Democratic State (S)				
Terrorist Group (T)		Threaten/Attack	Threaten/Not Attack	Not Threaten/Attack	Not Threaten/Not Attack
	Threaten/Attack	9,12	13,1	11,11	14,4
	Threaten/Not Attack	3,8	7,16	1,7	8,13
	Not Threaten/Attack	12,9	15,2	10,10	2,6
	Not Threaten/Not Attack	4,5	5,14	16,3	6,15

APPENDIX E

Risk-averse terrorist group

Terrorist Group warns, Democratic State warns	Democratic State		
Terrorist Group		Attack	Hold
	Attack	5,12	13,1
	Hold	3,8	11,16

Terrorist Group warns, Democratic State does not warn	Democratic State		
Terrorist Group		Attack	Hold
	Attack	7,11	14,4
	Hold	1,7	12,13

Terrorist Group does not warn, Democratic State warns	Democratic State		
Terrorist Group		Attack	Hold
	Attack	8,9	15,2
	Hold	4,5	9,14

Terrorist Group does not warn, Democratic State does not warn	Democratic State		
Terrorist Group		Attack	Hold
	Attack	6,10	16,3
	Hold	2,6	10,15

Sequential decision whether or not to threaten, with terrorist group as first mover

	Democratic State		
Terrorist Group		Threaten	Do Not Threaten
	Threaten	5,12	7,11
	Do Not Threaten	8,9	6,10

Risk-neutral terrorist group

Terrorist Group warns, Democratic State warns	Democratic State		
Terrorist Group		Attack	Hold
	Attack	7,12	13,1
	Hold	3,8	9,16

Terrorist Group warns, Democratic State does not warn	Democratic State		
Terrorist Group		Attack	Hold
	Attack	9,11	14,4
	Hold	1,7	10,13

Terrorist Group does not warn, Democratic State warns	Democratic State		
Terrorist Group		Attack	Hold
	Attack	10,9	15,2
	Hold	4,5	7,14

Terrorist Group does not warn, Democratic State does not warn	Democratic State		
Terrorist Group		Attack	Hold
	Attack	8,10	16,3
	Hold	2,6	8,15

Sequential decision whether or not to threaten, with terrorist group as first mover

	Democratic State		
Terrorist Group		Threaten	Do Not Threaten
	Threaten	7,12	9,11
	Do Not Threaten	10,9	8,10

Risk-acceptant terrorist group

Terrorist Group warns, Democratic State warns	Democratic State		
Terrorist Group		Attack	Hold
	Attack	9,12	13,1
	Hold	3,8	7,16

Terrorist Group warns, Democratic State does not warn	Democratic State		
Terrorist Group		Attack	Hold
	Attack	11,11	14,4
	Hold	1,7	8,13

Terrorist Group does not warn, Democratic State warns	Democratic State		
Terrorist Group		Attack	Hold
	Attack	12,9	15,2
	Hold	4,5	5,14

Terrorist Group does not warn, Democratic State does not warn	Democratic State		
Terrorist Group		Attack	Hold
	Attack	10,10	16,3
	Hold	2,6	6,15

Sequential decision whether or not to threaten, with terrorist group as first mover

	Democratic State		
Terrorist Group		Threaten	Do Not Threaten
	Threaten	9,12	11,11
	Do Not Threaten	12,9	10,10