Protection or Provocation:
Does Hosting a U.S. Military Base Increase the Incidence of Terrorist Attack in a Country?

by

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Abstract

Historically, and particularly since the end of World War II, United States military

installations overseas have served to protect the U.S. and the nation hosting the

installations against prevailing international threat. However, as international threat

has transitioned from nations and militaries to small groups or individuals the efficacy of

a U.S. base in a foreign country to provide security is called into question. This study

examines the relationship between U.S. military bases in a foreign country and terrorist

attacks in that country from 1999 to 2008. During this period there was an ongoing

effort to restructure U.S foreign policy, including military doctrine and force structure,

to face a changing international environment. Using a mixed methods design, the study

draws from base politics literature, social science literature and terrorism literature to

develop an understanding of how presence and numbers of U.S. military installations in

a country are related to the terrorist attacks in that country. Quantitative analysis finds

that, with few exceptions, there is no significant relationship between U.S. installations

and terrorist attacks in a country when evaluated at the global or regional levels.

Furthermore, the study identifies a distribution anomaly which occurs when relating

counts of bases and attacks. The qualitative analysis, using an intervention analysis

design, finds only minimal evidence of a relationship between U.S. bases and terrorist

attacks in a country when examining countries which allowed the first U.S. base into the

country or removed the last U.S. base in the country during the study period. Further,

this analysis finds that U.S. bases in a country are, at best, tangentially related to

terrorist attacks in a few countries. For the majority of the countries studied no

relationship was evident. Thus, while terrorist attacks may be a consideration *one* of

the many factors in the domestic and international environment in the base decision

making process, despite an abundance of rhetoric to the contrary, there is no specific

justification for terrorist activity to have a position of great importance in the process.

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Chapter 1
Introduction

The United States military has been an important tool of U.S. foreign policy

almost as long as the country has existed. U.S. foreign policy focuses on making the

nation secure and prosperous in a tumultuous international environment. The primary

goals of U.S. foreign policy—national security and prosperity—are stable, but the tools,

ways, and means to reach these goals must be adaptive. Shifts in the international

environment require reassessment of the tools needed to achieve the country's foreign

policy goals. Former Under Secretary of Defense for Policy, Douglas Feith, eloquently

describes how U.S. overseas basing posture has evolved and identifies the requirement

for additional change in the Forward to the Defense Department's 2004 review of the

military's global posture.

> "Since the United States became a global power at the turn of the 20th
> century, it has changed its forward posture as strategic circumstances
> have evolved: from bases for administering new overseas territories, to
> post-World War II occupation duties, and then to a Cold War
> containment posture. Today, fifteen years after the fall of the Berlin
> Wall, it is again time to change our posture to fit the strategic realities of
> our era: an uncertain strategic environment dominated by the nexus of
> terrorism, state sponsors of terrorism, and the proliferation of weapons
> of mass destruction" (2).

From this we can see that, though a U.S. global military presence has been

considered essential for world peace and order for at least the last six decades (Bacevich

2010), its make-up varies with changes in response to an evolving foreign policy. U.S.

foreign policy, and with it the status and role of U.S. overseas military basing, has been

in flux since a significant shift in the international structure occurred in 1991. That was

when the Cold War, which had pitted the forces of communism against those of

capitalism and which had defined the global security environment for decades, ended with the collapse of the Soviet Union. In the ongoing discussion about the role of U.S. military installations overseas in a new international security situation, a number of authors (Archick (2006), Dreher and Gasebner (2008), Eland (1998), Glover (2006), Johnson (2004 and 2008), Pape (2009) and Scheuer (2006)) assert that, in direct opposition to its primary function of protecting our nation's interests, the U.S. overseas basing system adds to the threat globally, to the U.S., and to the host country.

Some of the studies make this claim with research based at the global level. Blum (2005) concluded that, overall, terrorist choose targets in countries which cooperate with the United States. Dreher and Gassebner (2008) determined that being a friend of the U.S., as evidenced by coincidence of U.N. voting, results in countries being more prone to terror all else being equal. Grossman (2002) and Moore (2007) also apply the results of their work to make global level claims that U.S. bases are a cause of war or recipe for terrorism. This view that bases may have some causal effect is visible in U.S. policy as well. Terrell (2006) tells us that the U.S. is looking for basing arrangements that do not encourage radicalism.

There are numerous studies and articles using regional level analysis which make the claim that U.S. presence increases local threat. Fear that U.S. bases placed in any country in Africa will bring an increase in terrorism to the continent has been identified by authors such as Last(n.d.), Ochieng (2003) and by government officials like South African Defense Minister Lekota (in Guvamombe 2007). Grolinger (2009) and Lindsay-Poland (2004) identify how the U.S. presence in Latin American is perceived by many

regional leaders as a threat to regional peace and stability. Similar research can be found about U.S. presence in outerh regions. Lutz (2009) says that her research indicates that a majority of the Korean population believe a reduction in U.S. military presence would increase national security. In an effort to understand the effects of the U.S. overseas basing structure on host nation security, this dissertation is an examination of the relationship between number or presence of U.S. military bases in a host country and the number or occurrence of terrorist attacks in that country.

The study finds that, when examined at the global level, the more U.S. bases located in a country, the fewer terrorist attacks occur in that country, all other factors being held constant. However, the influence is so marginal as to make the effect almost meaningless. Furthermore, there were some methodological inconsistencies which limit the application of this finding. Additionally the study uncovered that neither number of bases nor the presence of a base in a country has a statistically significant relationship with the number or incidence of terrorist attack in that country when analyzed at the global level, all other factors held constant. At the regional level, there is also no consistently significant statistical relationship between number or presence of U.S. bases in a country and number or incidence of terrorist attacks in the country. Finally, the study finds that, at the country level, putting a U.S. base in a country where there is not one, or removing the only U.S. base in a country, does not appear to have an influence on terrorist attacks in that country.[1] This first chapter of the dissertation provides a brief background of the study, specifies the research question, addresses the

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[1] Ecuador and Uzbekistan are possible exceptions as explained in chapter 5.

study's significance and relevance to current policy discussion and presents a very brief overview of the study's mixed methods design.

Background

In the early 21st Century, terrorism rose to replace communism as the most significant threat to international security and stability. With the Global War on Terror's replacing the Cold War, countries around the globe, led by the United States, joined together to combat this newly significant threat to international security. This dramatic change in the international environment resulted in the need for an equally dramatic change in U.S. foreign policy, including an examination of how the military should be used and based in response to the new threat and the evolving foreign policy.

Inherent in the military's roles as described by Under Secretary Feith, administration of new lands, occupation and rehabilitation of war torn Europe, and Cold War containment, is the idea that the military base served a purpose larger than just its defense function. O'Hanlon (2008) explains that "Having forces abroad also provides the United States with multiple options for using military power for limited political purposes, to send messages or reaffirm resolve" (48). There are numerous examples of U.S. forces and bases being used in a broader foreign policy role.

In the mid 1800s, U.S. President Millard Fillmore sent Commodore Matthew Perry to Japan to gain access to Japanese ports and to establish a treaty of peace and friendship with the country (Commodore n.d.). In the early 1900s, the Roosevelt Corollary to the Monroe Doctrine stated that the U.S. would provide defense to the countries of Latin and South America. The corollary was conceived and administered in

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service of a broader U.S. interest, control of the hemisphere (LaFeber n.d.). It resulted

in the military being used as a foreign policy tool so much that "the United States

Marines become known in the area as 'State Department troops' because they are

always moving in to protect State Department interests and State Department policy"

(LaFeber n.d., 1).

The trend continued through the 20th Century. Duke (2009) chronicles how U.S.

Cold War bases in post war Europe had a dual purpose. On one hand, they were often

located in key strategic choke-points, and thus were intended to influence the military

behavior of potential adversaries offering protection to both the U.S. and the host

country. On the other hand, the bases were used within the host-country or region to

gain political leverage. Since the end of the Korean War, the U.S. has maintained a large

number of military bases in South Korea despite the lack of conventional threat to the

U.S. from the North Koreans. These forces were positioned not only for their military

capability to protect South Korea but also to remind other countries the U.S. had

interests in the region.

Moving into the 21st Century, at the same time the U.S. was reducing its military

presence in the U.K. and Germany, it was in negotiations for basing rights with several

countries in Eastern Europe. Arguably, the military functions of these facilities could

have been done from anywhere in Europe. However, U.S. military installations in

Poland, the Baltic States, Bulgaria or the Czech Republic would simultaneously meet

military needs, protect these countries from a potentially resurgent Russia and "act as a

catalyst for change in these post-Soviet countries whose populations had begun to demand democratization and reform" (Lachowski 2007, 4).

Even given the 21st Century examples above, with the end of the Cold War and the beginning of the Global War on Terror, some have suggested that U.S. intervention in the affairs of other states, including the presence of U.S. military installations overseas, has resulted in an increase threat to our country (see Eland 1998; Johnson 2004 and 2008; Pape 2009; Scheuer 2006 and others). Furthermore, some scholars have suggested that countries that support the U.S. in these global actions also face increased threat (Archick 2006; Dreher and Gasebner 2008; Glover 2006). Dreher and Gassebner (2008) determined that political proximity to the U.S., measured by voting coincidence with the U.S. in the U.N., is positively correlated to increased terrorist violence. If this is true, then the U.S. military may be failing in its primary function of providing national security and its secondary function of protecting allies.

Research Question and Significance

To explicate the relationship between U.S. overseas bases and threat to the host country, this study examines if and how, during the first decade of the 21st century, the presence or numbers of U.S. military installations in a country could have been associated with the incidence or number of terrorist attacks in that country. The specific question which motivates this study is: What, if any, effect has the presence or number of U.S. military overseas installations had on the incidence of terrorist activity in the host country in the first decade of the 21st Century?

Much of the contemporary base politics literature does not explicitly address the threat to the host country from a decision to host a U.S. military facility (Blaker 1990; Calder 2008; Cooley 2008; Diehl 2009; Vine 2009b). Furthermore, most of the literature which addresses U.S. military presence in foreign countries operationalizes presence by counting people not installations (Azam and Thelan 2010; Calder 2008; Cooley 2003 and 2008; Li 2005; Lutz 2009; Lutz and Lutz 2010; Meernik 2008). This study is different from those works in that it focuses on sites/installations which are U.S. in name or understanding[2] rather than on the number of personnel.

The study assumes that the presence of a U.S. facility or the U.S. use of a host country facility such that it appears to be a U.S. facility represents a significantly different relationship between the host county and the U.S. than does one that simply allows U.S. troops to be deployed in a country. This is because bases are "literal and symbolic anchors, and the most visible centerpieces, of the U.S. military presence overseas" (Lutz 2009, 6). Additionally, a base often has a long-term large economic and social impact in an area (Lachowski 2007) which deploying troops would not. The 2005 Overseas Basing Commission Report documents that "Where we put our forces, our unit sets, our supplies, our fueling points and our training facilities implies a bilateral relationship that is mutually supportive and focused on common interests" (8).

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[2] Some facilities which have a large and very visible U.S. presence are not officially U.S. installations, usually for political reasons. However, these facilities may be considered U.S. installations by the locals, the U.S. government or the host nation and therefore will be considered as such in this study. See chapter 3 for a discussion of how this is determined.

Relevance to Current Policy Discussions

National security policy is based in national security strategy. The 2010 National

Security Strategy (NSS) is the current guiding vision for U.S. national security policy

(White House 2010). The 2010 NSS is based on a military employment approach which

calls for smaller "lily pad" bases[3] in more locations around the global rather than the

concentration of installations and forces in strategic locations used in support of most of

the prior National Security Strategies. One can infer from this policy change that in the

future the U.S. will be in negotiations with numerous countries about different types of

basing rights. How these installations affect host nation security will be a pertinent

issue in these discussions.

The timeframe of the study, 1999-2008, provides data relevant to this ongoing

policy discussion. The period represents an era when the international threat was

continuing its transition from Communism and nation-states to terrorism and the sub-

national actor. It is also a period when U.S. overseas presence underwent structural

shifts driven by the conclusions reached by the Base Realignment and Closure

Committee (BRAC) and from the Report of the Overseas Basing Commission in 2005.

Many of these structural changes were guided by the 2002 National Security Strategy's

(White House 2002) overseas basing construct of smaller more flexible basing; still a

predominant construct evidenced by the 2010 NSS's emphasis on smaller joint and

combined use overseas bases (White House 2010).

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[3] Lily-pad bases refer to small bases often in remote parts of the world near areas where conflict may spring up. Some will be used as routine equipment depots but most are designed as staging locations for U.S. and allied forces when crises arise.

Sterngold (2004) reported in the San Francisco Chronicle that the Defense Department sees these lily pad sites as "…not merely as a means of defending the host countries—the traditional Cold War role of such installations—but as jumping-off points for future 'preventive wars' and military missions" (1). Because these bases can be used as jump off points for combat operations or as logistic centers for military operations, their role as defenders of U.S. security is clearly visible. But how does the host nation gain from the arrangement? As noted by Sterngold (2004) and others, historically the protection offered by a U.S. presence is one of the reasons countries agree to accept U.S. facilities (Hoopes 1958; Meernik 2005) but how a lily pad base operates in the defense of the host nation is not readily identifiable.

Duke(2009) goes so far as to state that "since the bases are increasingly about establishing 'lily pads'—or projection points—they are no longer directly concerned with the security of any particular host nation" (14). The Overseas Basing Commission Report (2005) observes that this new (lily-pad) construct may make basing rights more difficult to secure because they are not focused on host nation security. It expounds on this noting that the Koreans, historically strong U.S. allies, are reevaluating their base hosting arrangement given the idea that the forces it hosts may not be dedicated to protecting Korea. If these reports are correct, they could indicate that it may be more difficult for the U.S. to secure the overseas locations it needs in the future. Thinking further, if these new lily-pad bases do not serve to protect the host country, but in fact have the unintended consequence of increasing the threat to the host nation, it would seem prudent to reassess the security strategy calling for them (Frost 2003).

Methodology

The study uses a mixed methods design to explore the relationship between bases and terrorist attacks. The design is a quantitative-qualitative model; the quantitative data are compiled and analyzed first. Then based on those results, countries for the qualitative study are chosen.

For the quantitative section, the dependent variable, terrorist attacks, is coded in two ways. First, a count of the attacks in a country by year is compiled, and second, each country is coded depending on if an attack occurred in a year. The key explanatory variable, U.S. military installations, is coded in the same way. Several other explanatory variables are culled from the terrorism literature but because of collinearity issues only three are included in the final models. Four quantitative models have been developed to examine the issue globally and regionally, controlling for other factors.

The initial qualitative section of the study uses an intervention analysis methodology, looking specifically at the instances when the first base was installed in a country or the last base was removed and how that change relates the incidence and number of terrorist attacks within the country. The intervention analysis is designed to "assess the effect of a discrete event or intervention on some measure of a process" (Yaffee 1999, 1). In this study, the event is the addition or removal of a base and the process is terrorist attacks. The inquiry is conducted breaking the countries into three groups 1) countries which had a base at the beginning of the time period and not at the end, 2) countries which both installed and removed the only U.S. base in the country in the ten years of the study, and 3) countries which did not have a base at the start of the

study but did at the end. The circumstance around the attacks before, during, and after, as applicable, the base presence are examined to see if the base could in any way be a contributing cause for the attack.

Additionally, the qualitative section conducts an in-depth examination of two countries, Saudi Arabia and Qatar, using a most similar design case study methodology. These two states were selected because in 2003, the midpoint of the study, a base was exchanged between these two similarly situated countries. A detailed inspection of the social and political factors around the basing decisions, coupled with an assessment of the circumstance around the terrorist attacks in these countries explicates the role of the U.S. base in these attacks.

Delimitations and Definitions

The timeframe for the study, 1999-2008, while chosen with care, is not used without placing certain limits on the work. Expanding the timeframe was considered but the data for both the independent and dependent variables are not as readily available or consistently gathered and reported outside of this decade. While ten years is not an extremely long period, this decade does include the entire era of the declared war on terrorism which provided the backdrop for the increased scrutiny of the relationship between U.S. overseas bases and actions and violence. The timeframe also encompasses changes in the U.S. overseas basing structure which were initiated by studies in the mid-90s then codified by the 2002 National Security Strategy. The period is one where the U.S. has been, for the most part, at war in two locations, which affects

the decision matrices for base placement and for terrorist action. This could limit the applicability of the study in non-wartime periods.

One of the challenges when writing a paper about terrorist acts is defining terrorism. O'Conner (2009) suggests that definitions of terrorism change over time and geography and that terrorism may be indistinguishable from crime in some circumstances. It is this sort of ambiguity that results in the often heard saying that "one man's terrorist is another man's freedom fighter." Despite the ambiguity of definition, some common identifiers have emerged. There is some agreement that terrorism is 1) political—the actors have some intention to change a more general situation or structure than just what was attacked, 2) coercive—the goal is to affect something other than the actual target; the perpetrators have demands, 3) not military focused—targeting non-combatants is not a routine part of prosecuting warfare[4] (O'Conner 2009).

However, even within these bounds disagreement arises. Some suggest that the status of the actor should not enter the equation (Paust 2010), implying that states and armies could be terrorists. Others question whether the terrorist act must be, in reality, violent, or if the threat of violence also should be classified as terrorism.[5] General acceptance of either of these positions would greatly expand the number of terrorist incidents and groups. Because of the myriad views of what constitutes terrorism, many scholars believe that a single definition for the term will never be agreed upon (Ganor

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[4] This is a debatable point considering the strategic bombing campaigns of World War II.

[5] The Defense Department and the FBI disagree on this factor. The DOD definition of terrorism includes "the calculated use, threatened use of force or violence." Under the FBI's definition, "unlawful use of force or violence," the threatened use of force is not terrorism (as cited in O'Conner 2009, 11).

2002). This means that each terrorism researcher arrives at his/her own definition of terrorism within some generally accepted guidelines.

This study takes its definition of terrorism from its source for terrorism data, the Global Terrorism Database (GTD).[6] Therefore, for this study terrorism is: intentional violence by sub-national actors, not within the context of legitimate warfare activities, for the purpose of obtaining some type of goal by influencing decision makers. Just as with any data source, the use of the GTD places some limits on the ability to generalize from the results. The GTD includes both domestic and international terrorism, indicating that this study's findings may be applicable when looking at domestic or international terrorism individually. Additionally, as explained in more depth in the methodology section, the fact that the source of the GTD's information is primarily news reports means that it is possible that attacks found in other datasets may not be represented in this study.

Overview of the Remaining Chapters

Chapter Two provides a review of the base politics and terrorism literatures and establishes a theoretical foundation for this study. Some historic misperceptions about U.S. overseas basing are dispelled. Then, Cooley's (2008) Two Level Game Theory is joined with social science theory on international and domestic pressure to explain how countries, including the U.S., approach basing decisions. Following this, the terrorism literature is culled and explanations for terrorist acts based on rational choice theory

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[6] The GTD criteria are fully explained in chapter three.

and the strategic model of terrorist activity are developed. These two literatures are then synthesized to explain how U.S. bases might affect terrorist activity in a country. The study's specific hypotheses are presented at the end of the chapter.

Chapter Three includes a detailed explanation of the variables and methodology used in the study. Coding of the dependent and independent variables is elucidated. The theories behind, and the coding and sources for, the explanatory variables are identified. The factors which informed selection of the four quantitative models are described. The intervention analysis country selection is explained and the data sources and evaluation tools are specified. The rationale behind evaluating Saudi Arabia and Qatar as a separate case study is clarified and the case study methodology is detailed.

Chapter Four presents the findings from the quantitative section of the study. An initial concern is that collinearity limits the number of explanatory variables to three plus the base variable. Ultimately, the four quantitative models offer somewhat ambiguous results. With one exception, no significant relationship between either the number or presence of U.S. bases and the number or presence of terrorist attacks in a country is uncovered. Where the relationship is significant, the applicability of the results seems to be limited. Perhaps more significantly, the quantitative section uncovers a troublesome methodological challenge when attempting to relate U.S. bases and terrorist attacks at the global level. A distribution issue between counts of bases and terrorist attacks creates serious concerns about the reliability of the conclusion of studies using these data and attempting global level analysis.

Chapter Five reveals the results of an intervention analysis of 13 countries which had a U.S. base, but not for the entire period of the study. This examination is done by looking at three groups of countries: 1) countries which removed the only base in the country at some point in the study, 2) countries which both installed and removed the only U.S. base in the country, and 3) countries which did not have a base at the beginning of the study but allowed the first U.S. base into their country during the period. This inquiry uncovers no concrete relationship between the presence of the base and the terrorist attacks, although a circumstantial argument in favor of a relationship can be developed for a few of the countries.

Chapter Six is an examination of terrorist attacks in Saudi Arabia and Qatar using a most similar design case study methodology. While attacks rose in Saudi Arabia after the base was removed, there is very little to link the base removal to the increase in attacks. In Qatar, the number of attacks remained negligible after the base was installed, again for reason*s* apparently unrelated to the basing decision. In both cases, the change in number of terrorist attacks seems better explained by the countries' anti-terrorism activities and the governments' relationship to the population than by the presence or lack of the U.S. installation.

Finally, Chapter Seven closes the study with general conclusions, a discussion of policy implications of the study, and areas for future research. The study contributes to the policy arena by clearly demonstrating that global and regional level analysis shows there is no significant relationship between U.S. bases and terrorist attacks in a country. The study notes that the move to smaller lily-pad bases may have an impact on the

frequency of basing negotiations and renegotiation which may require reassessment of negotiation policy.   The study advances the literature noting that the basic theories of the base politics literature are still valid. It also demonstrates that terrorism literature still has significant work to do in its efforts to find a root cause for terrorism. The study found no support for those authors who suggest that U.S. bases overseas foster terrorism. Additional research about the implications of collinearity identified by auxiliary regression, but not by VIF, is called for as is examination of the problem of the uneven distribution of base count and terrorist attack count. Study on the effects of base size, location (urban or rural), and usage on unrest in a country might provide insight into preferable basing features given country specific conditions.

Chapter 2
Literature

Overseas Bases as Foreign Policy

Military might is one of the myriad methods and instruments with which countries conduct foreign policy. Virtually since this country's inception, the United States has used its military might as a foreign policy tool to project its power around the globe. Establishing bases in foreign countries has long been considered an essential, albeit often controversial, part of a state's power projection[7] effort (Pace, Pickering and DuBois 2010).

The bipolar international environment from the conclusion of World War II to the end of the Cold War created an "Us vs. Them" world. Fearing a common threat seemed to make it easy for the U.S. to ask for, and get, basing rights in many non-communist countries. In this period, the U.S. established bases around the world, primarily in locations where our military force would be best arrayed to meet the U.S. foreign policy goal of containing the spread of communism (Converse 2005). It is intuitive that most of these bases, usually large with significant military populations and situated across from Soviet military forces, provided an active defense for the country in which they were located as well as providing defense for the United States; they were militarily very functional.

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[7] *J1-02: Department of Defense Dictionary of Military and Associated Terms*, defines power projection as "The ability of a nation to apply all or some of its elements of national power - political, economic, informational, or military - to rapidly and effectively deploy and sustain forces in and from multiple dispersed locations to respond to crises, to contribute to deterrence, and to enhance regional stability."

While meeting military need is most often the principal task for a military base, bases are foreign policy tools as well. It can be argued that bases reach maximum utility only when they support larger foreign policy goals in addition to serving their military purpose. For example, U.S. bases during the Cold War were both militarily effective and supportive of larger foreign policy objectives. Duke (2009) explains that our Cold War bases in Europe had a dual purpose. On one hand, they were often located in key strategic choke-points, and thus were intended to influence the military behavior of potential adversaries. On the other hand, the bases were used within the host-country or region to gain political leverage.

In a more subtle illustration, after World War II the U.S. decided to allow families to accompany service members overseas. While this may have helped keep the military member focused on his/her job, adding to military readiness, Alvah (2000) describes how the government also hoped that American families would become "'unofficial ambassadors' who would embody the model American family and, by extension, American social and political ideals" (22-23). She states emphatically that these "Families were *implements* [emphasis in the original] of U.S. foreign policy" (20). Blaker (1990) offers that the bases placed in Germany and Japan immediately after World War II were established not only for what they allowed the U.S. to do to contain current adversaries, but also for how they limited the host country's (recent adversary) options.

As a result of the changed international security environment at the end of the Cold War, the U.S. modified its overseas basing structure, removing bases from some regions and countries and establishing them in others. But military requirements were

not the only considerations in deciding where to put the bases. The Overseas Basing

Commission Report (2005) says that "A base structure is more than a military

consideration. It is a political arrangement of the first order that has bilateral,

international, cultural, and economic consequences" (10). Therefore, in addition to the

military functionality, the new overseas basing arrangement had to serve a broader

policy objective (Blaker 1990).

At least one part of this broader objective should be to provide stability in the

country/region where the bases are located. It is well understood that successful U.S.

foreign policy depends on stable allies and partners (White House 2010). When

bases/sites are established to further the goals of peace and security for the U.S. and

the host country, they also have important secondary effects in maintaining stability and

peace in that host country (Meernik 2008). The Atlantic Council Working Group on

Military Bases Abroad (2005) said that, "bases can be important for military reasons,

but, if properly utilized, they have significant diplomatic value as well and can support

U.S. informational and even economic goals" (xii).

Whether U.S. bases are meeting this expected broader policy goal to provide

stability for the host country and have diplomatic and economic value is a scarcely

studied question. The dearth of research on this subject might be in part due to the

manner in which the security, stability and economic prosperity of the host country is

defined. Or it might be the fall-out of the complex interactions between the presence of

U.S. bases and various segments of the country/regional population. Nonetheless,

knowing if U.S. bases provide stability, or worse create instability, in the host country is

important to understanding the future of overseas basing. For example, if U.S bases create instability within a country, then it can be argued that they may result in decreased security for both the U.S. and that country. If this is true, it is unlikely that such bases are serving the long term policy interests of the United States. Additionally, countries should be less willing to host a U.S. facility if the base is thought to increase the potential for violence in the country.

There has been considerable rhetoric positing that U.S. involvement overseas raises the threat against the U.S. and her allies, but there has been little actual research on this supposed effect. In 1997, the Defense Science Board reported "a strong correlation between US involvement in international situations and an increase in terrorist attacks against the United States," (15) but provided no empirical data to validate the claim (Eland 1998). Vine (2009), writing for the website "Foreign Policy in Focus," states that U.S. overseas bases are "engendering grievances and anger, and generally creating antagonistic rather than cooperative relationships…reducing, rather than improving, our national security" (2), but he also provides no evidence to support this claim. While there have been some studies which addressed U.S. presence and terrorist attacks as part of their model (e.g. Azam and Thelen 2010; Grossman 2002; Meernik 2008), there have been few if any examinations of the relationship between the presence of U.S. bases and terrorist activity in a country.

In a study based on data from 1953-2003, Meernik (2008) found that U.S. presence, measured by number of personnel, had a statistically significant but

functionally negligible negative[8] effect on host country stability. In his study, stability

was measured by level of domestic unrest, terrorist incidents and outbreak of war in a

country. Tai, Peterson and Gurr (1973) examined the relationship of U.S. Cold War

overseas bases with anti-American sentiment in the host country. They found a

substantial, positive relationship between U.S. bases and anti-American sentiment, but

only in countries with relatively high internal stress. Unfortunately, they did not

investigate whether the presence of a U.S. facility or U.S. personnel added to the

internal stress of a host nation as Meernik's (2008) research indicated it did.

These two works have utility for building an understanding of military basing's

role in facilitating the broader U.S. foreign policy goal of providing for host country

stability. But, in terms of informing future basing decisions, these studies may be

limited by the use of personnel levels, and not bases, as an explanatory variable and by

the fact that most of their data predate the change in overseas basing structure

mandated by the 2002 National Security Strategy. However, from these two studies

emerges the idea that if a country is relatively stable and has low internal stress it is

unlikely that a U.S. military presence (defined by number of personnel stationed in the

country) will substantively increase instability in the country or generate noteworthy

anti-American sentiment.

Both of these studies were conducted using data primarily from the Cold War

era. In the 21st Century global security environment the question arises: Do U.S.

overseas installations result in increased or decreased security for the host country? An

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[8] As number of U.S. personnel went up, host country stability went down.

examination of historic base levels and base level changes should provide an answer to this question.

Historical U.S. Overseas Base Levels

For its first 150 years, the U.S. had a relatively small overseas military basing structure. In 1938, the U.S. had only fourteen military bases outside its continental borders (Blaker 1990). However, that number would increase dramatically as a result of U.S. involvement in World War II. By the end of the Second World War, the U.S. reportedly had tens of thousands of installations in nearly 100 countries (Lutz 2009). In 1945, President Truman avowed that the U.S. was going to maintain the bases necessary for the "…protection of our interests and of world peace" (Truman in Converse 2005, 121). However, despite Truman's assertion that the U.S. would maintain most of her overseas bases, by 1949 almost 75% of the World War II basing structure was gone (Blaker 1990). In the 1950s, the U.S. doctrine of containment—a U.S. foreign policy which used the elements of national power to prevent the spread of communism—used this much smaller basing structure to box-in the Soviets with a ring of commitments, treaties, agreements and bases (Nathan and Oliver 1989).

Despite the massive post-war reduction of U.S. overseas bases, during the second half of the 20th Century an inaccurate perception existed that, once established, overseas U.S. bases were never closed. This assumption was buttressed by the U.S. doctrine of containment and its associated policy of strategic denial (Johnson 2005). Strategic denial was the policy that the U.S. should never withdraw from any area or base which could be used by the Soviet Union (Magdoff et al. 2002). The view that U.S.

overseas bases were considered permanent is evident in a 1970 report by the U.S.

Senate Committee on Foreign Relations Subcommittee on Security Agreements and

Commitments Abroad which stated that

> "Once an American overseas base is established it takes on a life of its own….not only with the intention of keeping the facility going, but often to actually enlarge it. Within the government departments most directly concerned—State and Defense—we found little initiative to reduce or eliminate any of these overseas facilities" (19-20).

But the truth is somewhat different than the perception. For the most part, the

quantity of overseas bases followed a wartime cycle. As noted earlier, there was a

massive reduction in bases at the end of World War II. The number of bases remained

low until the Korean and then Vietnam Wars created demand for additional overseas

facilities. In the post Vietnam era, the number of bases was cut to less than the pre-war

figure, though with a different geographic distribution (Magdoff et al. 2002). The

buildup-drawdown cycle continued at the end of the Cold War, with a typical post-

conflict drawdown of U.S. overseas presence in the early 1990s (see Figure 2.1).

[Figure 2.1 about here]

By the end of the Cold War in 1990, over 80% of our overseas bases were in

Europe, and one-third of the remaining was in Japan (Blaker 1990). The quantity of

bases in the Western Hemisphere was down about two-thirds from it 1947 levels

(Magdoff 2002). Similarly, the U.S. had no bases in South Asia and only a small number,

less than ten percent of the 1947 amount, in the Middle East, despite an apparent

increasing threat from these regions (Magdoff 2002).

But the end of the Soviet Bloc and its communist threat ushered in a new international environment. While overarching U.S. policy goals of security and prosperity did not vary, changes in the international environment necessitated modification of the tools, including the number and location of overseas military bases, used to realize those goals. The geographic distribution of U.S. overseas forces has changed greatly since then (see Figure 2.2), and the 2010 National Security Strategy indicates that further changes are likely.

[Figure 2.2 about here]

With the rise of the global terrorism threat in the 21st Century, the U.S. continued the restructuring of its overseas military base structure, adapting to the new strategic landscape. In 2004, the Pentagon undertook the Global Defense Posture Review which marked the first "fundamental transformation of U.S. basing posture since World War II" (Cooley 2008, 6). This was one of the early attempts at the ongoing task of modifying U.S. overseas presence in the face of a changing threat

Even with several administration and congressional studies advising why and how to scale back U.S. overseas presence (see for example the Global Defense Posture Review in 2004 and the Atlantic Council Working Group on Military Bases Abroad or the Overseas Basing Commission Report in 2005) the perception that the Department of Defense desired to maintain a large structure of overseas military bases has not evolved much since the U.S. Senate Committee on Foreign Relations Subcommittee report in the 1970s. That inaccurate perception can be seen when in 2005, the Atlantic Council

Working Group on Military Bases Abroad had this to say about the military's interest in

reducing the overseas base structure:

> "These bases may not be located in areas that support the focus
> of current U.S. defense activities. Because basing rights on foreign soil
> are difficult to acquire, the U. S. is reluctant to relinquish foreign bases
> even in locations that are not needed today. In most cases, bases are
> kept as a hedge against future needs." (x)

Size is only one aspect of the overseas basing structure. There are a number of

factors which are taken into consideration when determining where and why to put a

base in another country. The number of bases may not be as important as whether the

installations provide the right capabilities in the right locations.

Why Does the U.S. Put Bases in a Location?

American military forces stationed overseas are recognized as one of the most

profoundly visible symbols of U.S. commitment to global security (White House 2002).

The 2005 Overseas Basing Commission Report states "Where we put our forces, our unit

sets, our supplies, our fueling points and our training facilities implies a bilateral

relationship that is mutually supportive and focused on common interests" (8). Thus,

when the U.S. is making decision regarding the placement of U.S. bases, both the

military functionality of the location and the consequences of the base on overall U.S.

foreign policy goals must be considered.

It seems intuitive that when deciding whether or not to establish or remove a

base, the U.S. must consider both the military functionality of the location and, to some

extent, the likely effect the presence of the base will have on the security of the host

country. Lutz (2009) writes that Pentagon officials generally argue for overseas bases

using both utilitarian and humanitarian grounds. The utilitarian argument has three themes: 1) bases provide security for the United States, 2) bases serve the national economic interest of the United States, and 3) bases are symbolic of U.S. power and credibility. The humanitarian argument says the bases are gifts to other nations— serving as both defense sites and wealth generators, and that bases protect free trade that benefits all nations and providing a wedge for the expansion of freedom. So, when it comes to bases, even military leaders recognize that host country security and stability is a necessary component of U.S. security. However, some claim that bases can also serve to scare or anger people in the host country or in other countries of the region (Blaker 1990). For example, Sagan (2005) posits that by establishing bases in the Pacific in the 1940s to protect our interests in the region, the U.S. created an anxiety in the Japanese which led to the attack on Pearl Harbor. A similar comment can be heard about contemporary U.S. bases in the Middle East.

The utilitarian part of the argument seemed well supported from the end of World War II to the end of the Cold War. During that period, U.S. overseas basing structure supported a variety of U.S. national security strategies all with a common military goal of maintaining forces and allies to combat the Soviet Union. The bases were positioned to counter a traditional military ground assault by the Soviets and its allies from Eastern Europe into Western Europe. It was obvious that these bases, usually large and with significant military populations, provided an active defense for the country in which they were located as well as providing security for the United States.

But in the post-Cold War era, the explanatory power of the first two elements of the utilitarian argument and the first element of the humanitarian argument is being questioned. Overseas bases, particularly those in the Middle East, are now said to increase rather than reduce the threat to the U.S. and the host nation (In addition to Osama Bin Laden's comments after the September 11, 2001 attacks on the U.S., see Arkin 2002; Frost 2003; Grossman 2002; Lutz 2007). With an amorphous enemy and few if any clear lines of attack, how the base may provide security and stability to the host nation is not as clearly demonstrated as it had been (Calder 2007). As for the second element of the utilitarian argument, there are many who suggest that overseas bases are excessively expensive and are hindering rather than facilitating our country's economic growth (Alyawm 2009; Johnson 2004 and 2008; Vine 2009b). The results of this study should enlighten the first of these issues, whether U.S. bases/installations continue to meet their historic commitment for mutual defense in the post Cold War era.

In his book on base politics, Cooley (2008) advances the concept that much of the literature about U.S. bases is supported by an often undeclared assumption that the U.S. can place a base where ever it wants and then do, for the most part, what it wants from that location. Johnson (2004 and 08) and Grossman (2002) suggest that the U.S. simply forces its bases on nations without regard to the host nation's interest. Byman (2006) offers that even with the 2002 National Security Strategy's call for closer ties with foreign governments to prosecute the war on terror, U.S. military doctrine only mentions considering the needs of host nations in passing. Despite its widespread

acceptance, this assumption, much like the one about the nonstop expansion of U.S. overseas bases, is unfounded.

Even if the contention that the U.S. forces it bases on other countries were accurate, the statement that it does so "simply" is not. U.S. efforts to establish bases in Central Asia and Eastern Europe attest to the complexity of the basing process. These two examples highlight how the interest of third parties, in these cases Russia, can complicate what is often considered a bilateral process. Broadly speaking, obtaining basing rights can be a long drawn out political process, resulting in specific time limits and restrictions on operations being negotiated and established (Cooley 2003). One of the most well-established examples of this process is the restriction on U.S. aircraft and ships capable of carrying nuclear weapons, not to mention the limits on nuclear weapons themselves, which exist in many foreign locations (Calder 2007).

Less emotionally charged activities have been restricted by host nations as well. The limits placed on U.S. activity from airbases in Turkey and Saudi both while enforcing the Iraqi No-Fly-Zones over and then when planning for the 2003 Iraq Invasion are examples. Having established an installation is no guarantee of future basing rights either. Permission to remain in the host country can be withdrawn, or threaten to be withdrawn, as events in Turkey in the 70s; the Philippines in the 90s; and Kyrgyzstan and Uzbekistan more recently, demonstrate.

Calder (2007) identifies the basing rights negotiation process as falling into the game theoretic model of "iterative games" (82). This periodic renegotiation of basing rights provides host states the opportunity to reassess and reassert their rights and

interests (Cooley 2003). This iterative process facilitates consideration of changing host

country interests and priorities. Enloe (2009) and Yeo (2005) argue that periodic

revalidation of basing rights allows citizen action to play a significant role in a country's

decision to allow, or remove, a base. Ultimately, a discussion about basing focused

solely on U.S. interest ignores the reality that the U.S. cannot just put bases where it

wants nor can it do what it wants with those bases after the fact. As important as an

installation might be to U.S. policy objectives, there is another country with its own

foreign (and domestic) policy goals to consider before a basing decision is made.

What Factors Might Influence a Country's Basing Decision?

Security/Development

Meernik (2008) submits one of the more general explanations of why a country,

particularly a developing country, would host a U.S. base. He advances three reasons

which seem very much like mirror imaging of Lutz's (2009) discussion of the Pentagon's

utilitarian and humanitarian arguments, with slightly more focus on economics. The

first reason to host a U.S. base is for security—a U.S. base can provide security, relative

freedom from worry about outside interference in the country's affairs, and stability,

domestic steadiness and tranquility, so that the nation can develop. Second, closely

related, is that the U.S. military presence can allow a country to use limited resources to

further its prosperity rather than spend them on its defense. Third, the U.S. presence

can stimulate the local economy and provide local jobs.

These justifications, particularly the first two, seem valid when a common threat

can be identified or when the U.S. presence in a country arises from a call for assistance

to help with some type of domestic uprising. However, these broad explanations

provide a very simplistic view of base politics. In contrast, other scholars suggest that

the base hosting decision is far too complicated to be identified as a simple

economic/security calculus.

Two-Level Game

Cooley (2008) introduces a Two-Level Game Theory of base politics to explain

"when and why bilateral military basing agreements become accepted, politicized or

challenged" (3). Cooley's theory attempts to illustrate how host country political

systems and regimes influence base decisions. He suggests that the host country basing

decision is a two-level game shaped by the host regime's dependence on a contract for

political survival and the credibility of the host nation's political institutions. Cooley

(2008) asserts that the standard realist views of bases primarily as tools of mutual

security are outdated. He contends that security may not be the host-nation's primary

"base-related benefit" (14) when making the decision to allow the U.S. facility.

Cooley's (2008) theory provides insight on why bases might continue in

democratic countries which may not share some policy goals with the United State and

also why newly democratized countries might not provide the most stable environment

for U.S. military bases. He offers Turkey and Korea as examples of instances when, in

the 1960s/70s and late 1990s and early 2000s respectively, the external threat did not

change significantly but the views on U.S. bases in these countries became extremely

volatile leading to changes in the U.S. basing structure in those countries. These cases

demonstrate that threat and security may not always be the primary consideration in a

country's base hosting decision matrix.

U.S. Pressure

Grossman (2002) contends that sometimes countries do not have the option not

to allow U.S. bases; they are strong-armed into accepting U.S. installations. He goes on

to say that since 1990 the U.S. has been "using" humanitarian intervention as well as

military action to expand its network of overseas installations. He claims that after the

intervention or conflict ends, U.S. forces remain behind and the host countries are

unable or unwilling to reject or remove the U.S. presence. While history has shown that

during conflicts the number of overseas bases trends upward, there does not appear to

be any specific evidence that those bases are maintained against host nation wishes. [9]

In fact, as mentioned previously, after a conflict ends a large number of bases are

usually shut down.

Alternately, Lachowski (2007) posits that, in the post-Cold War era, the U.S. is

facing more opposition to establishing bases, even during conflict. He points to the

difficulty the U.S. had in securing operation locations for U.S. troops during the Gulf

War, and later the Iraq War, and wonders if securing basing rights during conflict is even

possible in the current international environment. There is some evidence that

Lachowski's thesis may be valid even in countries outside places where combat is

occurring.

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[9] One notable exception might be Guantanamo Bay in Cuba. However, because the U.S. does not have formal diplomatic relations with Cuba it can be argued that our government does not "officially" know if the Cuban government approves of the base or not.

News reports from around the globe indicate governments may be reluctant to have U.S. bases in their country or region of the world for fear of increasing terrorist activity. More specifically, articles from Latin American press (Golinger 2009; Lindsay-Poland 2001; Carroll and MacAskill 2009) suggest that some countries in Latin America perceive increased U.S. military presence as a direct threat to the region's peace and stability and therefore will not permit a U.S. base in their country. John Lindsay-Poland (2001) suggests that the reluctance of some countries in Latin America to host large military facilities may be partly responsible for the U.S. policy call for smaller bases in the post-Cold War era.

The same concern can be found in Africa. Jeremy Keenan, an African specialist at the University of East Anglia in Britain has written that leaders in some countries in Africa say that U.S. involvement on the continent "will generate terrorism" (in Motlagh 2005, 1). This type of regional contagion regarding the threat from hosting U.S. installations has obvious implications for U.S. basing strategy. Whether true or not, a belief that hosting a U.S. base will result in the spread of terrorist activity throughout a region is a significant challenge to U.S. basing access. Pressure from domestic social groups is yet another factor which can affect a basing decision.

Domestic Pressure

Social movements provide an avenue for the population of a country to indicate concern or dissent about a government decision. Jan Keller, Jiří Maštálka and Oskar Krejčí (2007) focus on popular disenchantment with attempts to establish a U.S. radar

installation as part of a missile defense system in the Czech Republic. They claim that

the proposed radar installations were not built, in spite of the Czech Republic

government's initial support for the project, because of organized opposition by some

groups. This is not an isolated incident of popular opposition to a base successfully

affecting a basing decision. While not technically an overseas location, in Puerto Rico

public pressure was instrumental in getting a bomb range closed in 2003 (Lutz 2007).

However political pressure has not always been successful achieving its goals

regarding a basing decision. Kawato (2005) did a study on the efforts of social

movements in Japan to have U.S. bases removed or reduced. He determined that

despite intense pressure brought on by a significant local issue, the rape of a local girl by

a U.S. Marine, social movements achieved only partially success affecting government

policy. They managed to have the Marine installation on Okinawa reduced in size, and

to have some additional restrictions placed activities at the base, but the government

did not agree to eliminate the U.S. presence, the group's initial goal.

So, while the Japanese government did make some concession to the

movement, the base remained. In this case, the social movement could not apply

sufficient pressure for total policy change. Calder (2007) suggests this is a structural

function of the Japanese federal system. Even though the costs of hosting the U.S. base

are perceived as high at the local level, the national benefits are seen as greater by a

central government with strong control over its provinces and municipalities. The

implication, according to Calder (2007), is that a general trend toward decentralization

and pluralism in countries around the world could have a destabilizing effect on base politics.

Holmes' (2006) analysis of U.S. bases in Turkey suggests that one of the most important factors for government acceptance of U.S. troops is whether they are welcome by the host country population, and this is something which can change over time. While initially welcomed with open arms, over the course of half a century popular support for U.S. troops in Turkey diminished; the U.S. presence began to be seen as less of an asset to the country.[10] This led to an increase in political action, including "unorganized forms of unrest" (2), focused against the U.S. presence. Holmes credits this unrest with ultimately leading the Turkish government and the U.S. to reduce the number of bases and troops in Turkey in the 1990s. An argument could be made that this same phenomenon took place in Saudi Arabia in the 1990s, although in that case there was significant outside influence to have the base and troops removed as well.

Yeo (2005) suggests that the varying success of social movements can be attributed to security alliance patterns. Security alliance patterns are a function of U.S. perceptions of security benefits and host state security dependence on the United States. They are part is a bilateral relationship which evolves over time. Thus Holmes' and Yeo's work taken together suggests that security concerns may have a consistent place in the basing decision matrix, but that the peoples' perceptions of the U.S. presence can change over time, and those perceptions can result in social movements

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[10] It could be argued that the same thing happened in Kyrgyzstan over the course of half a decade.

putting pressure on the host government and which could overshadow the perceived security benefits.

Social movement acting against U.S. bases, like those explored by Kawato (2002), Holmes (2006) and Yeo (2009), demonstrate that there are countries where the populace may not be receptive to new, or even existing, U.S. bases. In these places the populace can pressure their government to revise basing decisions. Research demonstrates that terrorists often have mainstream political aims; the difference is that their preferred method of action is violence (Abrahms 2008). Therefore it is likely that terrorist organizations may share interest in these popular causes and when the governments are slow or reluctant to act, violence may result. The idea that acceptance of troops can change over time and this can lead to terror attacks is noted by Pape (2005) who suggests that one of the key causes of terrorist attacks is when foreign troops are [no longer] seen as an invited ally but rather as an occupying force. Due to the challenges of accurately measuring the perceptions of a country's population regarding the foreign troops at a military base in isolation from other factors causing discontent, there is little research related to this idea.

Literature on Terrorism

Terrorism literature originates primarily from two camps: those interested in terrorists and terrorism as an intellectual pursuit, and those who want to understand terrorist actions and activities in order to deter, co-opt, or otherwise affect their decision cycle. The first group endeavors to understand terrorists' actions and psychology: how terrorists recruit, how their violence escalates, what their motivations

are, etc (Richardson 2007). They study terrorism as a subject on its own merits. The second group is more interested in counter-terrorism, discovering methods to detect and deter terrorists and terrorism, than in terrorism itself. Richardson (2007) writes that the latter literature primarily emerged with a "new breed of terrorism expert" (xix) who appeared after September 11, 2001.

Literature on terrorism and anti-terrorism is a rapidly growing body of work, but some allege it is a body growing only in quantity not in quality. Shepherd (2007) recounts that Andrew Sikes, the Director of Terrorism Studies at the University of East London, says a new English language book on terrorism is published every six hours. However, she goes on to say that most of them are narrowly focused and "obsessed with suicide bombings and Islamic terrorism" (1). Jackson (2009) reinforces this idea, saying that the field (terrorism studies) suffers from "a narrow focus on a restricted set of topics" (171). This predisposition to studying terrorism with a narrow focus is an interesting problem for a concept with over 200 definitions in the literature. Hoffman (1996) opined that terrorism was becoming more complex and amorphous, yet the research seems to trend toward being more and more focused. Jackson notes that the "vast majority of terrorism research…attempts to provide 'policy-relevant' advice to governments" (2009, 181). Policy relevance requires actionable information and analysis which comes from very specifically focused research.

Perhaps this is indicative of the trend in social science research toward what Meade (2010) identifies as "scholasticism." Meade offers that political scientists have a laser like focus on narrow questions and methods at the expense of relevance. Meade

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surmises that this narrowing of focus is an effort to establish scientific rigor within the

discipline. He concludes however that it results in precisely defined and analyzed

conclusions which then often do not reflect a complex reality. Jackson and Meade seem

to be suggesting that policy relevance may come at the expense of a true understanding

of the subject.

Understanding what causes or motivates terrorism is a complex task, in no small

part because it seems apparent to those that study terrorism that no single cause exits

(Robinson 2006). Much of the literature says that terrorist behavior can be traced back

to theories about psychological factors and structural (or strategic—expressions of

political strategy) factors (Reich 1990). The consensus is that neither of these is

sufficient on its own to develop an adequate understanding of terrorism. Crenshaw

(1998) opines that psychology and structure represent the poles—they establish the

boundaries of our understanding of terrorist behavior. Smith (2008) also extends a view

of psychological factors and structural factors representing opposite ends of a spectrum

with each having importance in explaining terrorism.

Psychological Factors

A significant quantity of literature exists on the psychology of terrorism, but

there is very little agreement within these works. This lack of agreement may be an

acknowledgment of the difficulty defining the subject. As psychiatrist Jerrod Post noted

in his testimony to the Subcommittee on Emerging Threats and Capabilities, Senate

Armed Services Committee just weeks after the September 11, 2001 attacks on the

United States, "there is a broad spectrum of terrorist groups and organizations, each of

which has a different psychology, motivation and decision making structure. Indeed, one should not speak of terrorist psychology in the singular, but rather of terrorist psychologies" (Post 2001 in Borum 2004).

The rationality of terrorists or terrorism has made for interesting scholarly debate (see Crenshaw 1998 and Post 1998 to get the two points of view). But as Goertzel (2002) points out, terrorist behavior is a combination of rational and emotional reactions which vary based on specific circumstances. From the psychological perspective, this study will not engage in the debate about what motivates individual terrorist to join a terrorist group or terrorist recruitment methods. Nor will it address the change patterns which may be evident in terrorist behavior. It will simply follow the strand of literature which recognizes terrorists as rational actors seeking to obtain a political end.

The understanding of terrorist behavior as rational is grounded in deterrence and game theory. These theories represent terrorists as rational actors whose behavior is a strategic choice. While some might question if terrorist are truly rational, Woo (2006) notes that Pascal argued it may be irrational not to risk one's life for the infinite rewards of afterlife.[11] Woo also points out that, rational or not, there is little to be gained from underestimating someone who expects to be a martyr.

Rationality indicates some measure of goal orientation as the basis for action. Kydd and Walter's (2006) research maintains that terrorist violence can be understood

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[11] Lake 2002 provides an interesting argument for terrorism as a rational act based not on current bargaining position, the focus of most proponents of the rationalist approach to war, but rather as a means of setting the stage for future bargaining.

as a form of signaling. The signaling is done from a position of weakness and is designed

to influence governments' decisions. This signaling is usually directed at the

government decision makers but it may also be an attempt to influence the population

so they will affect change. Rose and Murphy (2007) contend that the Madrid train

bombing in 2004 was designed not as much to affect the government in power as to

pressure the population to change that government.

If the terrorists' goal is to send a message to the government, because there are

two governments involved in a basing decision, the U.S. and the host nation, it stands to

reason that both should be seen as potential receivers. But this does not necessarily

have to be the case. It is possible that terrorists may attack to influence the U.S., while

restricting their actions so as not to menace the host state (as the Saudi case seems to

demonstrate). Under these circumstances the base may not actually increase the host

nation threat. Also, as deterrence theory suggests and the Saudi case exhibits, when

terrorists don't act against host nation assets but rather act against foreign interests,

the response from the host government may be somewhat muted (Trager and

Zagorcheva 2006). Nevertheless, what emerges from this literature is an understanding

of terrorist actions and motivations based on what Abrahm (2009) calls the Strategic

Model.

The strategic model of terrorist activity is grounded in rational choice theory and

holds that 1) terrorists want to maximize political return; 2) terrorism can gain

government concessions; and 3) terrorism is best combated by providing nonviolent

political alternatives (Abrahm 2009). The strategic model originated in the study of how

domestic groups and networks influence governments. However, this theory can be taken beyond its traditional application to domestic groups. At its heart is the belief that terrorists are rational actors who conduct attacks for political ends (much like states). Some researchers are examining transnational terrorism as a subset of transnational activist networks (see Asal, Nussbaum and Harrington 2007). This is a relatively new approach in the effort to develop an understanding of why some groups turn to violence and other do not.

The view of terrorists as political actors is in contrast to those who suggest that terrorists are psychologically unhealthy, or that terrorism has a cultural basis. This study is not designed to discount or marginalize these views of a cultural basis for terrorism. In fact, the predominant religion in a country will be considered as a possible contributing variable in this study, as will the geographic region of the country. However, since the aim of this study is to inform policy decisions, a basic assumption of the study will be that terrorist acts have at their core some level of rational action focused toward a political goal.

The Strategic Model is useful in that it seems to predict that a U.S. overseas presence creates an opportunity for terrorists to use violence to reach political goals based on the relationship between the U.S. and the host country. This model encompasses domestic and international terrorism, and the factors it considers seem to arise consistently when discussing U.S. facilities in the Middle East. In this region U.S. bases are said to constitute 'defilement' of holy lands and the American military presence is resented by some segment of the population (Arkin 2002). Under the

strategic model, the political end is that individuals and groups do not want U.S. bases in their country, or any country for that matter, and so, lacking other options which they deem viable, they resort to violence.

However, key to terrorist acts being interpreted as signaling, as well as key to terrorism being understood as rational political choice, is that someone must say this is why the attack occurred; they must identify what they want/expect to gain. Rapoport (1997) explains if terrorists want to accomplish a goal they must claim credit and announce that goal. However, since the middle of the century, claims of credit for attacks have been decreasing. Hoffman (1997) details how in the 1980s terrorist claims of credit had drop to 40%, almost a 30% drop from the previous decade. By the time of this study, Wright (2009) indicated that credit was claimed for only 14.5% of attacks. A low level of credit taking presents a challenge in the qualitative section of this study. Where there is no claim of credit there is less likelihood that a causal relationship between the attack and a U.S. facility can be determined.

Structural Factors

Theories grounded in structural factors attest that the causes of terrorism can be found in the environment and the fabric of societies (Ross 2006). The structural causes are often grouped into two categories. Those things which create conditions suitable for terrorism—permissive factors, Crenshaw's preconditions (1981), or precipitant factors—those things which lead directly to terrorist acts. The permissive factors are systemic conditions, e.g. geographic location, type of political system, level of modernity, level of development found in all countries which may provide the necessary

environment but are not sufficient by themselves, to generate terrorism (Ross 2006).

Permissive factors provide the fertile ground from which the seed of terrorism can

spring forth, given the proper precipitant factors (Ross 2006). These permissive factors

provide the information to identify control variables for this study and are explained in

greater detail in the next section. The literature maintains that there are a number of

permissive and precipitant causes of terrorism which all work in concert with each

other. It goes on to identify grievances as the precipitant structural cause central to all

terrorism. For this study the grievance, the potential precipitant cause, is considered to

be the U.S. installation.

Permissive Factors

Research on U.S. overseas presence or democracy and terrorism has analyzed

the relationship between terrorism and a number of different structural factors believed

to be set the stage for terrorist activity (see Azam and Thelan 2010; Eubank and

Weinburg 1994; Meernik 2005). They are considered systemic conditions which may

provide an environment conducive to terrorist activity (Ross 2006). They include the

level of democracy, the length of time the government has been in place, the population

of the country, the total wealth of the country, the wealth distribution in the country,

the geographical region of the country, and a measure of religious beliefs of the

country's peoples.

Level of Democracy

The first factor for consideration is the level of democracy. The relationship between regime type and terrorism is a complex one, particularly in the case of democracies. Masters (2008) found no significant relationship between regime type and international/domestic terrorism. However, other research has demonstrated a direct and significant link between terrorist groups and democratic countries. For example, Eubank and Weinberg (1994) found that terrorist groups are three and a half times as likely to occur in democratic countries as in non-democratic countries. This appears to be in part due to the openness found in democratic society which provides fertile ground for terrorist groups to grow (Sandler, Arce and Ender 2008). Chenoweth (2010) contends that within democracies political competition leads to more groups and more violence, while participation and executive constraints are not indicators of terrorist activity. On the other hand, Li (2005) tells us that level of democracy, when measured as democratic participation, has been shown to have a negative relationship to terrorist attacks. Similarly, Savun and Phillips (2009) uncovered no statistical relationship between democracy and domestic terrorism and Lutz and Lutz (2010) found no strong support for the notion that democracies suffer more international terrorist violence. The conflicting results of these studies may indicate that the relationship between democracy and terrorist attacks is more subtle than expected. Lutz and Lutz (2010) discovered differences in the relationship depending on whether the analysis was done globally or regionally. A difference in results between global and regional analysis emerges in this study as well.

A subset of the democracy issue is the role of the press. There is limited literature on how freedom of the press separated from democracy affects terrorism. In a democracy, availability of a free press allows individuals and groups with grievances to raise awareness and mitigates the need for violence (Sawyer 2005). A free press should provide an outlet for peaceful resolution of disputes through access to the institutional political apparatus. Having this venue for grievance resolution is something Crenshaw (1981) suggests should reduce terrorism.

The counter to this is that, because terrorists are in search of publicity, they are more likely to commit their violent acts in places with free(er) press. Li (2004) and Sawyer (2005) suggest that a free press has a statistically significant positive association with terrorist activity, in part for this reason. Sawyer (2005) goes on to demonstrate that when the effects of freedom of the press are separated from democracy, democracy has a significant negative association with terrorist activity while the free press has a positive association. Put more plainly, a free press "actually attracts terrorism because it allows publication and magnification of the impact of violence." (Sawyer 2005, 28) He suggests that democracy, independent of the effects of a free press, "discourages terrorism" (28). This is in direct opposition to Eubank and Weinberg's (2001) findings about the relationship between democracy and terrorism.

In this study, because the metric for level of democracy is participation rather than some other measure, the data should reveal that a higher level of democracy should provide a greater chance for political discourse prior to the placing or sustaining of a base. Additionally, a more democratic country should provide a greater number of

outlets for citizens to air displeasure after the base is established. This should reduce

the need for dissidents to resort to violence. Therefore, higher levels of democratic

participation in a country should have a negative correlation to terrorist activity without

regard to U.S. presence. To supplement this data, a variable will be included to help

determine the association of a free press with terrorist activity. This variable is

discussed in more detail below.

Regime Durability

Another factor identified as associated with terrorist activity is the length of time

a regime has been in power. Regimes which have been in place for some length of time

should have more experience and established institutions with identified processes,

positive or negative, for dealing with dissent without regard to type of regime (Meernik

2008). Any change in authority structure, not just a change in regime type, makes a

country more vulnerable to attack. Research by Eubank and Weinberg (1994)

establishes that new democracies are more likely to undergo terrorist events, perhaps

due to a lack of established institutions.

One possible reason for this increased likelihood of terrorist attack is that new

governments will not always honor the agreements of the previous regime creating

additional grievances during the transition period. Additionally, transition periods are

inherently unstable, and terrorists can take advantage of this opportunity to influence

the decisions of the new government (Sandler, Arce and Enders 2007) or those electing

the government. The 2004 terrorist attack in Madrid Spain could be seen as an example

of this second phenomenon. A terrorist attack three days before national elections is

credited with affecting the outcome of the voting (Rose, Murphy and Abrahms 2007).

The Popular Party of Spain, which supported the war in Iraq and which had a slender

lead in the polls at the time of the attack, was voted out of office and the Socialist Party,

which opposed the war, was elected. The terrorists used the attack to create fear in the

population in order to influence voting toward the party supporting their goals.

Population

The population of a state is also considered to be related to the level of terrorist

activity. Terrorism is more likely to occur in states with large populations, perhaps

because it is harder for these states to make everyone happy regardless of the avenues

available to address complaints (Li 2005). In addition, larger populations provide for

more dramatic incidents and the potential for more victims (Dreher and Gasebner

2008).

Gross Domestic Product

Economic differences can also play a role in terrorist activity. Some states can

provide their citizens a better standard of living and more economic opportunity. In

such states, the citizenry may have a brighter view of the future and have less of a

perceived need or desire to resort to violence to obtain political objectives. However, as

Dreher and Gasebner (2008) point out, richer countries often have stronger institutions,

such as police and intelligence agencies, providing greater potential to combat terrorist

activities. Thus, it is expected that states which are more economically developed will

demonstrate a lower incidence of terrorist attack.

Economic Inequality

Total wealth as determined by GDP might not provide a complete picture of how well a country's population is fairing. In terms of possible terrorist activity, income differences within a state can be argued to be as important as the total wealth of the country. Countries which have large difference between rich and poor, particularly if there is a small middle class, are more susceptible to unrest. For this reason, the inequality in income or wealth within the country will also be considered.

Region

As noted earlier, researchers have posited that regional similarities and differences might have some effect on the number of terrorist attacks (Meernik 2005). Lutz and Lutz (2010) demonstrated that there may be a significant difference between global and regional analysis of democracy's association with terrorism. Thus this study will address regional effects by adding binary variables for the major regions of the world; North America; Latin/South America and the Caribbean; Africa; Europe; Pacific region; and the Middle East (which includes Egypt for this study). This country distribution is taken from the geographic responsibilities of the United States Combatant Commands.

Dominant Religion

Finally, though this study has as an assumption that terrorists are rational actors pursuing political goals, some effort must be made to address the other motivation for terrorist activity most noted in the literature, religious ideology. The idea that much of the new global terrorism threat is a result of a radical Islamist ideology can be found in

both popular and more academic writings (see Johnson 2004 and 08; Dreher and Gasebner 2008; Eland 1998; Scheuer 2006). From this one might expect that countries where the U.S. has installations and Islam is the majority religion should experience a greater number of terrorist attacks. Pape (2005) makes this argument finding that difference in religion between the military force and local population is a strongly contributing factor to incidents of suicide terrorism. Bloom (2005) claims that religious ideology can be "critical" (88) in driving individuals to commit suicide terror. Even while drawing these links to religion and suicide terror, both Pape (2005) and Bloom (2005) conclude that suicide bombings are normally not conducted by groups with a religious motivation. On the other hand Fine (2008) argues that both these scholars misunderstand the "special (religious) nature of contemporary terror" (69) and that religious ideology does provide motivation for groups as well as individuals to conduct terror attacks. In their discussion of mass casualty terrorist activity, Asal and Blum (2005) note that religious motivation is a key component of the causal story of the new terrorists. Taken in total this could indicate that religion may have a role in terrorism larger than just motivation. And its influence may not always push toward violence. The Islamic admonitions against attacking other Muslims may influence against a group's decision to conduct a terror attack.

U.S. Basing and Terrorism

U.S. Global Policy

Perhaps as a result of the changing international environment since the Tai,

Peterson and Gurr study (1973), some of the contemporary literature points to U.S.

foreign policy as a driver of a global anti-U.S feeling (see Johnson 2004 and 08; Eland

1998; Pape 2009; Scheuer 2006). Something which has not changed is that U.S. military

installations overseas are still one of the most visible symbols of U.S. policy. Certain

scholars draw a specific link between the global anti-U.S. feeling and U.S. overseas

basing when discussing the international security situation, particularly as it relates to

terrorist actions. The Overseas Basing Commission (2005) said that as the U.S. moves

from the current large main base construct to smaller Cooperative Security Locations

(CSL) the threat must be evaluated for each location. Nichols (2005) indicates that

consideration of a general anti-U.S. feeling in the country was a factor when considering

the closure of the U.S. air base in Uzbekistan in 2005. People's disagreeing with U.S.

global foreign policy is not a new thing.

Lee (2008) makes an explicit and long term linkage between U.S. policy and the

Islamic world. He recounts how U.S. policy, based in the European Enlightenment and

the concept of natural rights, has been in conflict with Islam since U.S. independence.

He contends that the Barbary wars of the early 1800s, when the U.S. first began to

establish bases overseas, were the beginning of continuous battle between the U.S. and

Muslim countries and groups. When the U.S. presence was removed from the

Mediterranean in the 1840s privateers began raiding U.S. shipping leading to the return

of a U.S. fleet. This exchange between the U.S. and the Barbary pirates may well have been an indicator about how U.S. policy or basing may incite violence, particularly in the Muslim world, and may have been the precursor to the current war on terrorism.

Scheuer (2006) blames U.S. actions in the Middle East, including the stationing of U.S. troops in countries in the region, for the rise of fundamentalist terrorism. He is not the only one to hold this view. Robert Pape, a respected terrorism scholar, states that the driver of the global terrorist threat is the presence of American and Western Combat forces on the Arabian Peninsula (Kirby 2005). Pape (2005) suggests that suicide terrorism rarely occurs when the presence of foreign combat troops is not a factor.[12] He further points out that 95% of all suicide attacks since 1980 have a common goal of withdrawal of military forces from the terrorist's homeland (Kirby 2005).

Both these scholars credit U.S. installations with a rise in terrorist attacks globally. If they are correct, it seems a logical conclusion that because the installations' existence is a joint decision between the U.S. and the host nation, both should be at risk. Pape's (2005) research indicates that if U.S. bases increase the threat to either the U.S. or the host nation, suicide attacks should be a prevalent occurrence in countries where there are U.S. bases. This would be easy enough to determine; however, to this point there are few, if any, studies which have identified an empirically based correlation between terrorist activity and U.S. troop presence overseas.

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[12] Pape (2005) also says that the presence of foreign military troops appears to be a necessary but not a sufficient condition for suicide terror. Several other factors, prominent differences in religion between the foreign troops and the local society for example, are also important contributors.

U.S. Interference in Domestic Affairs

Related literature suggests that it is not U.S. global policy which is the impetus

for terrorist actions; rather it is U.S. interference in the domestic affairs of a country,

often represented by a U.S. presence, which is objectionable. Locals see the U.S. to be

supporting "despotic" rule in their country and for that reason oppose the base (Bloom

2005). In this instance they are not opposing the U.S. or U.S. policy in general; they are

concerned with how the base may affect them personally. Even if the regime is not

viewed as oppressive the U.S. installation might precipitate a terrorist attack as a result

of domestic concerns of social or political groups in the country.

Another side of this argument is that governments may have ties to the terrorist

groups (Byman 2006) and a more expansive relationship with the U.S. may require that

those ties be broken or at least loosened. In the Mid-East there were reports that many

of the governments had some relationship with Al-Qaeda and its leaders (see 9/11

Commission Report). It can be argued that this situation may lead to attacks against the

U.S. or U.S. installation rather than the host country. This is not an insignificant

distinction. It provides a reminder that the U.S. and the host nation will probably have

different approaches and interest with regard to anti-terrorism globally and in-country

(Byman 2006). The effects of this difference in perspective will be more fully examined

in the Saudi Arabia and Qatar section of this study.

The domestic pressure section of the literature review identified how opposition

to U.S. bases might energize social movements and political groups. This opposition

could be expected to generate terrorist acts in some cases. Masters (2008) suggests

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that terrorist groups form on the edge of existing political groups and social

organizations. Yeo (2005) points out that social movements have limited effect on

basing decisions because they must affect two governments, one foreign and one

domestic, and this is a difficult task. He further says that such groups are factional and

do not operate as monolithic political actors; so that, given limited resources, terrorist

acts may result from the competing alternatives.

Crenshaw (1981) writes that the most significant permissive factor for terrorist

activity is a "government's inability or unwillingness to prevent terrorism" (382). The

idea that government willingness or capability to oppose terrorism is significant in the

terrorists' decision making matrix is reinforce by the inclusion of these two concepts as

primary country level indicators in the Indications and Warning matrix developed for the

U.S. intelligence community by Khalsa (2004). With this in mind, the announcement of a

pro-U.S. basing decision might be expected to generate terrorist activity in a country

without a well established anti-terrorism record, especially if the U.S. installation is seen

as bolstering a host government's anti-terrorism effort.

The U.S. base in Djibouti, as well as many of the U.S. bases in South America, are

examples of U.S. installations which seems to fit this definition of installations which

were permitted in part to bolster the host government's anti-terrorism fight (Hiel 2009).

Parallel to Crenshaw's (1981) position that government ability and willingness to

conduct anti-terrorism is a key indicator of terrorist attacks, Enders and Sandler (1999)

offer that governments which have terrorism thwarting policies have made terrorist

action more expensive. This additional cost influences the terrorists' rational-choice

decision matrix, moving it away from violence. By agreeing to host a U.S. base, a country can be seen as taking a stronger stance against terrorism reducing the terrorists' options. This would seem to suggest that a country could be vulnerable to an attack in the time period between a formal announcement of the basing agreement and the establishment of the actual installation, particularly if there have been prior terrorist attacks in the country. This possible vulnerability prior to the actual installation's stand-up required placing a time-lag in the quantitative model.

In some instances both U.S. foreign policy and domestic factors may be at work. As a specific example, while Osama bin Laden called for a Global Jihad because of U.S. presence in the Islamic holy land currently controlled by Saudi Arabia, the Committee for the Defense of Legitimate Rights in Saudi Arabia objected to the same U.S. presence and claimed it was illegal because the U.S. was invited by a government which had lost its Islamic legitimacy (Mideast Mirror, July 4, 1996).

Hypotheses

Based on an understanding of the relationship between U.S. oversea bases and terrorist motivation/attacks arising from this literature, hypotheses were developed which this study will examine.

H1. The more U.S military facilities a country hosts the fewer terrorist attacks will occur.

H2. On average, countries which host at least one U.S. military facility have fewer terrorist attacks than countries which do not host U.S. facilities.

H3. The more U.S. military facilities a country hosts the lower the expectation that any terrorist attack will occur in a year.

H4. On average, countries which host at least one U.S. military facility will experience fewer years with terrorist attacks than countries which do not host U.S. facilities.

H5. When a U.S. facility is placed in a country which does not host U.S. facilities the incidence of terrorist attack goes down.

H6. When the last U.S. facility in a country is removed the incident of terrorist attacks rises.

U.S. Overseas Base Numbers

* includes an estimated 300 bases in Iraq and 300 in Afghanistan (Turse 2010)
1947-1988 from Blaker (1990)
2008 from Base Structure Report plus Iraq and Afghanistan estimates.
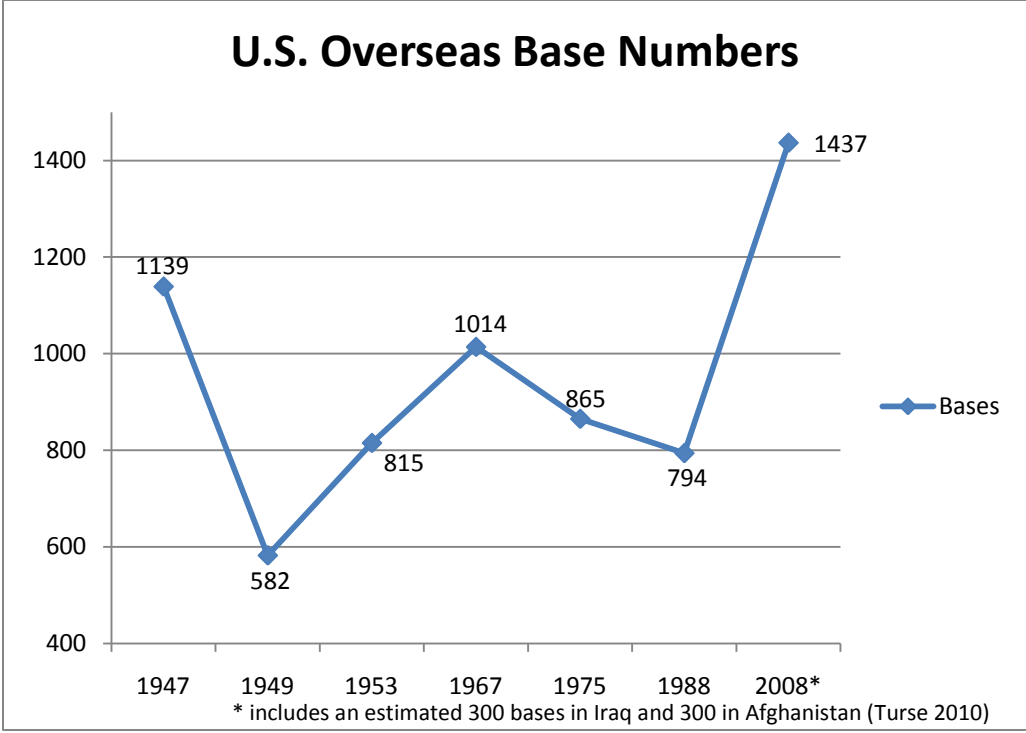
Figure 2.1
Overseas Base Numbers

U.S. Bases by Region

	1988	2008
Europe	627	449
Pacific	121	209
Latin America	39	17
Africa/Mid East	7	45
South Asia	0	3
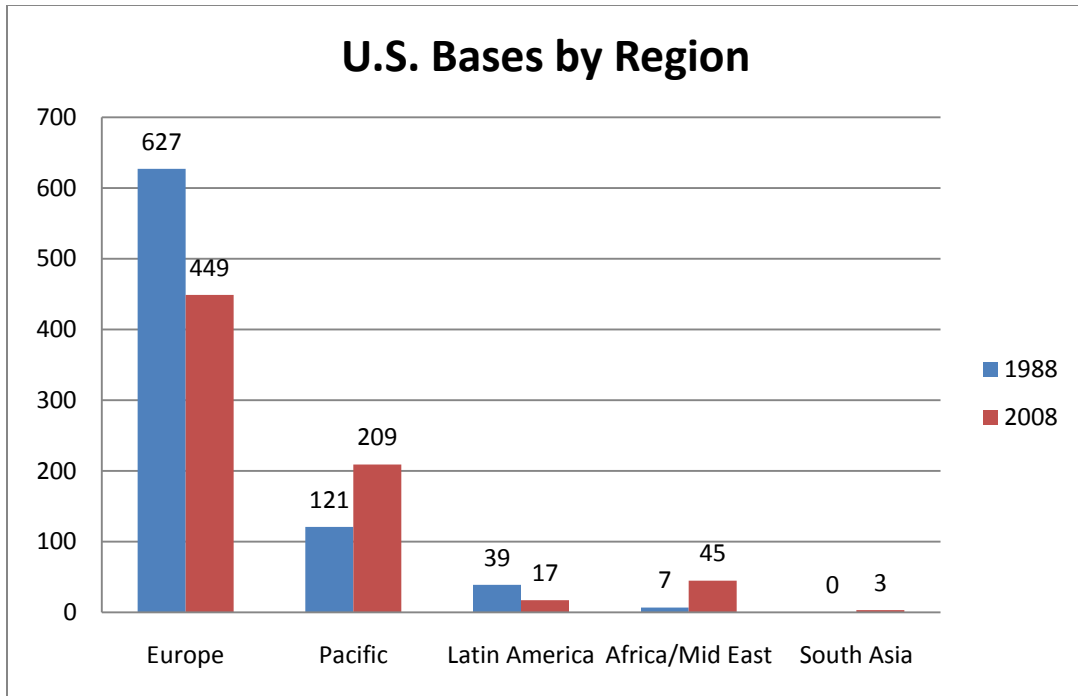
1988 data from Blaker 1990.
2008 data from Base Structure Report

Figure 2.2
U.S. Bases by Region

Chapter 3
Methodology

This study examines whether, and if, during the first decade of the 21st century, the presence or number of U.S. military installations in a country is associated with the incidence or number of terrorist attacks in that country. The study differs from the existent literature in that most base politics literature does not explicitly address considerations of the threat to the host country from a decision to host a U.S. military facility. Additionally, this study focuses on sites/installations rather than on the number of personnel. Personnel is the metric used by most of both the basing (Calder 2008; Blaker 1990; Cooley 2008; Lutz 2009; Congressional Budget Office 2004) and U.S. presence and terrorism (Azam and Thelan 2010; Lutz and Lutz 2010; Meernik 2008; Li 2005; Cooley 2003) literatures. This study considers that the presence of a U.S. facility, or the U.S. use of a host country facility such that it appears to be a U.S. facility, represents a significantly different relationship with the U.S. than simply allowing U.S. troops to be deployed in the country. For pragmatic purposes, the scope of this study is limited to a single decade, 1999-2008.

The early 21st century was selected because it was a dynamic time for U.S. basing policy. The 2005 Overseas Base Commission report observed that "Our Cold War basing structure, designed to deal with the preeminent threat of an expansionist Communist ideology, has been overtaken by events" (2). It also represents a time when the international community's view of terrorist attacks was evolving as well. Hoffman (2006) explains that since the end of the Cold War the terrorists' motivations seem to have changed. This, in turn, has initiated a change in the character of terrorism and

brought about "a new era of terrorist violence" (ix). As the literature demonstrates, the

transition from a security environment which emphasized constraining the aggression of

a supra-national entity, the Soviets, to one focused on the threat from sub-national

actors, terrorists, created significant challenges for the U.S. Department of Defense and

its overseas basing structure (Overseas Basing Commission 2005). In this period, U.S.

overseas presence was undergoing structural shifts driven by the consequences of the

stateside Base Realignment and Closure Committee (BRAC) report and the Report of the

Overseas Basing Commission in 2005. The experiences during this decade directly

affected the Obama administration's National Security Strategy published in 2010.

Further, the attacks on the World Trade Center complex in New York and the Pentagon

in 2001 challenged state leaders across the globe to develop a greater understanding of

terrorists' actions and motivation. This study explicates the intersection of these two

challenges.

The study examines the relationship between U.S. basing and terrorist attacks in

the host country using a mixed method design. A mixed methods approach can be

understood as a quantitative mini-study and a qualitative mini-study melded into one

larger design (Johnson 2005). Separate quantitative and qualitative phases are

necessary due to the complexity of the relationship between terrorist attacks and U.S.

bases. This study is what Creswell (2009) calls a sequential Quantitative-Qualitative

design; the quantitative data collection and analysis were conducted first, and then

based on those results the qualitative data were collected and examined.

The quantitative study consists of statistical analysis of data relevant to the relationship between U.S. basing and terrorist activity. The study looks at this relationship globally, and then regionally, which will help identify any region-specific particularities, such as those uncovered by Lutz and Lutz (2010) in their study of U.S. military intervention and terrorism. It is important to understand the statistical relationship between attacks in host countries and the presence or number of U.S bases in those countries. However, because both acts of terrorism and basing decisions are related to a variety of contextual factors, the numbers provide at best a broad overview of this relationship. A more detailed understanding of this relationship may be achieved by examining individual countries. Therefore, though the primary effort of the study is quantitative, the need for qualitative analysis is also indicated.

Quantitative Design

The goal of the quantitative analysis is to determine if there is a statistically significant relationship between the presence or number of U.S. bases in a country and the incidence or number of terrorist attacks in that country. Quantitative analysis creates a replicable process which can be modified as needed to accommodate new information or knowledge in future studies. Quantitative analysis allows the study to control for extraneous factors which may cloud the relationship. What it does not do is provide a complete understanding of the myriad complex interrelated political and social circumstances around any single base decision, individual terrorist act, or the relationship between the two.

Dependent Variable – Terrorist Attacks

For the study, the dependent variable is terrorist attacks. The variable is operationalized by using terrorist incidents as identified in the National Consortium for the Study of Terrorism and Responses to Terrorism (START) Global Terrorism Database (GTD).[13] This is one of the most comprehensive compilations of terrorist attacks in existence (Lafree and Dugan 2007). Use of the START GTD allows the study to include both domestic and international terrorism. Using both types of incidents is the exception, not the rule, for empirical terrorist studies (Enders and Sandler 2006). However, it is becoming more common (see Asal and Brown 2010 as an example).

The three criteria below are necessary conditions for an incident to be included in the START GTD:

(1) The incident must be intentional;

(2) The incident must entail some level of violence or threat of violence; and

(3) The perpetrators must be sub-national actors.

In addition, at least two of the following three criteria must be present for an incident to be included:

(1) The act must be aimed at attaining a political, economic, religious, or social goal;

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[13] The attack data were collected in January of 2010. At that time the GTD only included data to 31 December 2007. Data for 2008 come from the Worldwide Incidents Tracking System (WITS) developed by the U.S. National Counterterrorism Center (NCTC). The WITS is favorably compared to the GTD in its efforts to include both domestic and international terrorist attack data (LaFree 2009).

(2) There must be evidence of an intention to coerce, intimidate, or convey

some other message to a larger audience (or audiences) than the

immediate victims;

(3) The action must be outside the context of legitimate warfare activities.

That is, the act must be outside the parameters permitted by

international humanitarian law (particularly the prohibition against

deliberately targeting civilians or non-combatants)

(GTD Variables 2009, 5)

These criteria eliminate from consideration state terror and actions with a profit

motive. By using unfiltered information from an established data base, the study

minimizes selection error bias. One limitation of the START GTD is that, as an open

source data base, it relies primarily on data culled from news reports. This means that

the data are biased toward "news worthy" events. The dataset underreports terrorist

attacks if some attacks never reach the attention of the media (Lafree and Dugan 2007).

However, LaFree (2010) observes that over time this problem has diminished and

should continue to recede because "the salience of terrorism as a phenomenon today

makes it more likely than ever that media will report such incidents as information

becomes available" (Lafree 2010, 24). Nonetheless, in countries where the press is less

free, there are more government restrictions on what and how information is made

available to the public which could result in less reporting of terrorist attacks.

GTD information on terrorist attacks is coded in two ways for this study. First,

the data are counted by country for each year of the study. The number of attacks in

each year for each country has been taken directly from the Global Terrorism dataset.[14]

This "attack count" variable is used to evaluate if presence of a base or if the number of

bases influences the number of terrorist attacks, controlling for other factors.

Second, a categorical variable for attacks has been created. This variable was

coded "1" to indicate an attack occurred in a country during a year and "0" if no attack is

noted in a country in a year. This "attack incidence" variable allows logistic regression

to be used to analyze the relationship between the incidence of terrorist attack and

presence or number of U.S. bases, controlling for other factors.

Key Explanatory Variable – U.S. Basing

The study's key explanatory variable is U.S. overseas installations. As previously

noted, this is a departure from the personnel statistic most of the literature uses to

measure U.S. presence in a foreign country. One possible reason that most researchers

rely on personnel numbers is that these data are readily available and, for the most

part, straight forward. On the other hand, determining the presence and number of

U.S. installations in a country is a challenging and somewhat subjective process (Johnson

2004).

Part of the difficulty with using bases is defining what constitutes a base. There

is general agreement that a base contains some type of infrastructure, but there is little

consensus about other characteristics needed for a site to be called a U.S. military base

(Blaker 1990). Most authors anchor their basing statistics in Base Structure Reports, the

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[14] Sub-country entities which have their own entries are combined with the appropriate national entity. For example Corsica is combined with France.

Department of Defense's (DoD) annual summary of real property inventory (see Lutz

2009; Calder 2007; Blaker 1990; Cooley 2008; and others). However they often quickly

transition to personnel statistics to conduct their statistical analysis.

Base Structure Reports (BSR) are the primary source for the numbers and

locations of overseas installations in this study. The law requires the BSR to be

submitted to Congress annually.[15] The BSR provides a "comprehensive listing of all sites

owned or managed by DoD" (BSR, 2009, DoD-2). It is the official picture of what the

Department of Defense and the military services own, by location, in a given year. The

basic data are provided by each of the military services. The Office of the Deputy Under

Secretary of Defense (Installations & Environment) consolidates these data into a single

report for Congress.

The standard for inclusion into the BSR is that a site must be larger than 10 acres

or have a Plant Replacement Value (PRV) of more than $10 million. In some instances,

this PRV standard for a site, rather than geography or command authority standard,

generates a greater number of individual installations in a small geographic area than

might be expected. For example, there are more than 20 installations listed on the

Japanese Island of Okinawa, an area of only 454 sq. miles, one third the size of the state

of Rhode Island (BSR 2009). Sites that do not reach the PRV threshold are not listed

individually by location; rather they are aggregated by country into a single entry. A few

researchers consolidate the BSR entries into geographic areas, considering these areas

to be more indicative of the number of "bases" (See Blaker 1990 for example).

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[15] While required annually, the lack of BSR's for several years in the mid-1990s was a factor in limiting this
study to a single decade rather than starting with the end of the Cold War as had been originally planned.

However, the majority of the literature that discusses numbers of bases uses the count of facilities in the BSR (see Calder 2007; Johnson 2004; Lutz 2009). This study follows the majority practice of using the total BSR number to tally bases.

BSRs are produced to coincide with the U.S. government fiscal year, 1 October to 30 September. Therefore, their time frame does not match the calendar year time frame of the study's other sources. For ease of analysis, the study uses the BSR's data to represent the calendar year corresponding to the January to September data in that BSR. For example, the 2003 BSR provides data for October 1, 2001 to September 30, 2002; these data are used as the installation counts for 2002.

As noted by Vine (2009a), one limitation of BSR is that it seems to omit some locations which are "well-known" U.S. installations. This is because the BSR does not include locations which are not officially U.S. owned or leased. Most often these omissions are places where, often for political reasons, formal basing agreements may not have been reached (Engelhardt 2010). This study attempts to include as many of these unlisted locations as possible. A country's hosting of a U.S. facility is arguably a stronger commitment than just allowing U.S. troops into the country and for the purposes of this study the public perception or government acknowledgement of the existence of a U.S. installation is sufficient to call the country a host. Therefore, the study counts those installations which are publicly acknowledged as U.S. facilities, like

the Transit Center at Manas in Kirgizstan or Al Udeid Air Base, Qatar, even if they are not in the BSR.[16]

Installations included but not listed in the BSRs were identified through an examination of documents and sources referenced by other researchers of U.S. overseas installations. Once identified, each site was validated by finding corroborating information from official U.S. government or official host nation sources; e.g. military department web pages, construction budget requests, regional situation reports, or Department of State and host government announcements of a base sharing arrangement. Only then were these installations added to the dataset. An advantage to using government sources to validate the locations is consistency in data collection and reporting from year to year. See Appendix A to find the source information for the installations in each country.

The study does not intentionally include any classified, secret, or other government agency bases or operating locations. This is in part because of the difficultly in verifying the existence of the site, and in part because it would be irresponsible. Some readers may consider restricting the data to acknowledged military sites a limitation of the study. While it is true that operations from classified locations, or locations used by the other government agencies, could be considered to represent the greatest threat to terrorists' operations and therefore may have a significant effect on terrorist activity, these are not within the purview of this study. Additionally, some of the "secret" U.S. sites reported, most often on the internet, are not secret. Some are

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[16] It should be noted that Al Udeid AB in Qatar, formally established in 2003, does show up on the BSR's in 2006 and 2007 but not in prior or subsequent years.

acknowledged U.S. facilities with classified missions e.g. Pine Gap in Australia (Aicher 2008). These, of course, are represented in the study. Others are not U.S. military sites but rather host nation or contractor facilities which were built with the U.S. government support or U.S. companies, but without a U.S. military tie or presence, e.g. Nachshonim base in Israel (Golden 2005; O'Sullivan 2005). Finally, since the start of the wars in Iraq and Afghanistan, reliable unclassified totals of bases in those countries are not available. Consequently, data from Iraq and Afghanistan are not included in analyses requiring base counts after 2002.

The BSR list of facilities in a country, supplemented as described above, provides the number of bases in a country during a year. These counts of bases are used to analyze the effects of the number of bases on the incident or number of attacks. Just as with the terrorist attack data, a dummy variable has been developed for the basing data. For this variable, the base data was coded "1" for the existence of a base and "0" for no base in a country in a year. The study uses this variable to evaluate the relationship between the presence of a U.S. facility and the incidence or number of terrorist attacks. Unlike with the base count analysis, Iraq and Afghanistan are included in the base presence analysis for all years. The existence of at least one base in each country since the wars began is undisputable.

Explanatory Variables

As mentioned in the literature review, there are a number of factors which have been shown to be associated with terrorist activity. The study employs a limited number of these factors as explanatory variables. The majority of these explanatory

variables were developed from the literature on permissive factors for terrorism

(Crenshaw 1981; Ross 2006). The initial set of explanatory variables includes level of

democracy, regime duration, population size, level of economic development, level of

economic inequality, and dominant religion. The study also has a press freedom

variable and regional component. The source and coding of the explanatory variables is

clarified below.

Level of Democracy

The level of democracy is represented using the Political Competitiveness

(POLCOMP) measure from the Polity IV dataset (Marshall and Jaggers 2009). This

measure specifies the degree of institution of political competition by considering two

components, the extent of government restriction on political competition and the

competitiveness of the country's electoral participation. These components are

represented by the Regulation of Participation (PARREG) and the Competitiveness of

Participation (PARCOMP) variables in the POLITY IV data set (Marshall and Jaggers

2009).[17] POLCOMP is a 1-10 categorical scale and also allows for POLITY IV's

standardized negative authority codes for interruption Periods (-66), interregnum

period (-77), and Transition periods (-88).

For this study, a dummy variable has been created from the POLCOMP score.

The variable was coded "1" for those countries which have the highest POLITY IV

political participation score (10) and "0" for all others, including those with negative

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[17] For the specifics on the factors used to arrive at the composite PARREG and PARCOMP scores refer to the POLITY IV Handbook.

scores. A POLCOMP score of ten represents countries with a political system in which

"relatively stable and enduring political groups regularly compete for political influence

with little use of coercion" (Marshall and Jaggers 2009, 82). Additionally a ten indicates

that "No significant or substantial groups, issues or types of conventional political action

are regularly excluded from the political process" (Marshall and Jaggers 2009, 82). This

dichotomous variable provides a clear delineation between those countries with

"institutionalized competitive participation" (Marshall and Jaggers 2009, 80) and all

other countries.

Regime Duration

The data for regime duration come from the Polity IV database and are a count

of the number of years since a regime change in a country occurred. A regime change is

defined as a three point change in the POLITY score over a period of three years or less,

or the end of a transition period. The first year in which a new regime is established

becomes the baseline, or zero, year and then years are counted one up until the next

regime change or transition period (Marshall and Jaggers 2009).

Population and GDP

Data from the World Bank's World Development Indicators (WDI) provide the

study's population information. Level of economic development is represented by per

capita gross domestic product (GDP) information from the WDI.

Income Inequality

The Gini coefficient is a standard measure of income inequality. The study uses that indicator to represent economic inequality in a country. Because a Gini coefficient is not produced for every country every year, Gini scores are interpolated for years which do not have data. The statistical software drops countries for which no Gini scores are available from the analysis.

Percentage of Muslims

Rightly or wrongly, the global fight against terrorism has been represented as a war on Islam by many. So the study uses the percent of Muslims as a measure of the religion in each country. These data come from the CIA World Factbook and the NationMaster.com website. Because annual historical religious percentages are not readily available, and because the religious percentage in a country should not vary much over the short term of the study, the most recent statistic is used for all years.

Press Freedom

In addition to these factors, the study considers two other factors—press freedom and geographic region. While some research has identified correlation between democracy and press freedom as they relate to terrorist attacks (see Eubank and Weinberg 2001), other research suggests that this correlation is the results of researchers failing to account for the separate role of press in democratic countries (Sawyer 2005). For these reasons, the level of press freedom in a country was added as

a factor in the design. As noted when discussing the dependent variable, the GTD may

have some press-related bias in its terrorism count.

This variable is operationalized using the country's freedom of the press score

from Freedom House's annual survey of media independence. The Freedom House

survey provides each country a score from 0-100 based on 23 questions divided into

three broad categories: the legal environment, the political environment, and the

economic environment. [18] A lower score indicates a country with more freedom for the

press. Freedom House also places countries in categories based on their score.

Countries scoring 0 to 30 are regarded as having "Free" media; 31 to 60, "Partly Free"

media; and 61 to 100, "Not Free" media (Freedom House 2008). This study uses the

score from the full 100 point scale as the metric for press freedom in each country.

Press freedom is not the only additional factor this study will address.

Region

Research indicates there may be differences in relationships between terrorism

and some of the factors associated with it, for instance democracy, across regions (Lutz

and Lutz 2010). Meernik (2005) noted that the relationship between U.S. personnel

levels and terrorist attacks differed among regions as well. Additionally, the literature

demonstrates how U.S. basing varies by region over time (Blaker 1990). Region is also

important because ultimately, as this study's results demonstrate, the complex nature

of both basing and terrorist motivation makes them difficult to analyze at the global

level. For these reasons, the study includes a regional component.

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[18] A complete description of the methodology and questions can be found at
http://www.freedomhouse.org/template.cfm?page=350&ana_page=348&year=2008

The regional grouping is associated with the countries of responsibility as detailed in the Department of Defense (DoD) Unified Command Plan (UCP). The UCP is the DoD document which establishes missions and geographic responsibilities of Combatant Commanders, the senior military official responsible for an area or function (Unified Command Plan). This regional designation is very similar, but not identical to, the standard geographic regions used by most political scientists. The regional categories for this study are: NORTHCOM (North America and the northern most Caribbean Islands), SOUTHCOM (Latin and South America and the southern Caribbean Islands), EUCOM (Europe and Russia), CENTCOM (Middle East, Central Asia and Egypt), AFRICOM (Africa minus Egypt), PACOM (the Pacific region).[19] Within the SOUTHCOM region, one country, Columbia, accounts for the vast majority of the attacks, 86%, and a majority of the bases (41.5%) as well. For that reason a SOUTHCOM2 variable, SOUTHCOM area without Columbia, was designed. SOUTHCOM2 is used to control for the disproportionate impact Columbia may have on the SOUTHCOM results.

The regional categories are not used as variables assessing the region's relationship to the global data. Rather, they are used to group countries to assess the effects of the models within each geographic Combatant Commander's span of control.

Analysis

The study employs a cross-sectional time-series analysis, also known as Panel Data analysis, for the qualitative section. Panel analysis is a way to study a subject, in this case countries, over a defined period of time. It allows for use of a time series

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[19] For a complete list of the countries each command is responsible for see Appendix B.

cross-sectional data set—variables collected annually over a period of time for some

unit of observation (Yaffee 2003). Panel data allow control for variables which may not

be measurable within a country, and control for variables which may change across time

but not across entities (Torres-Reyna 2009). Within the panel data analysis, the study

employs two types of statistical analyses, binomial and negative binomial, which are

required by the two different dependent variable metrics.

Incidence of Attack Models

Incidence of attack is a dummy variable to designate if an attack occurred in a

country year. It is coded "0" if no attack occurred and "1" if there was an attack. The

study uses a GEE logistical regression technique with 1st order autoregressive

correlations and semi-robust standard errors to account for clustering on countries (see

Zorn 2001) to evaluate how the existence of a base, or number of bases, affects the

incidence of terrorist attacks. While selecting a model for the binomial variable was

relatively straightforward, determining the appropriate model when the dependent

variable is a count was much more complicated.

Count Variable Models

When the dependent variable is the number of attacks occurring in a given year,

the analysis requires a model which allows for count-based data. A Poisson distribution

regression model is considered the baseline, or starting point, for count data analysis

(Cameron and Trivedi 1999). The Poisson model is used because the ordinary least

squares (OLS) method results in biased, inefficient, and inconsistent estimates for count

data (Long 1997). The Poisson distribution model allows for analysis when the

dependent variable is a non-negative integer value and where there is no natural upper limit on an observed count, as is the case with the terrorist attack data.

However, for Poisson regression to be most informative, the chance of the dependent variable occurring should be randomly distributed: all countries should have an equal chance of having one, two, or more than two terrorist attacks. In this study, it does not appear as if the terrorist attacks are randomly distributed; some countries or regions appear to have a greater propensity for attack than others. If this is the case, the data are considered over-dispersed, and a different type of model is called for. Comparing the variance and the mean of the data confirms this over-dispersion.

In this study, the variance of the data is greater than the mean, therefore the Poisson model can generate standard errors which are too small (Jewell and Hubbard 2005). For that reason, the study uses a less specific negative binomial regression model. The negative binomial model is often used when count data are over-dispersed. Poisson and negative binomial regression models have been used by Meernik (2005), Dreher and Gassebner (2005) and Fine (2008) in designs with similar dependent variables.

Another potentially complicating factor in choosing a model for this set of count data is the very real possibility that the data have an excess of zeros. When the data have observations which should always be expected to be zero, neither the Poisson nor the Negative Binomial regression models provide accurate results. In such cases a zero-inflated model should be used (Long 1997). The decision between zero-inflated and

non-zero-inflated negative binomial models is not quite as straight forward as that between Poisson and Negative binomial models.

The decision whether to use a zero inflated model is not made based only on the presence of a large quantity of zeros in the data. It also requires that some of the observations always have zero counts based on a specific factor which may or may not be in the base model (Long and Freese 2001). The first task is identifying the specific variable which can be used to account for the production of zero counts (Long 1997). Once that is done, the various models are run and compared using Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), or maximized likelihood to evaluate goodness of fit.

For this study the specific factor which is used to identify countries with a tendency to report zero terrorist attacks is press freedom. Terrorists could chose not to attack in countries with lower press freedom because their message will not get out, and one of the reasons for terrorist actions is to raise awareness of their cause (Crenshaw 1981). Li (2005) and Sawyer (2005) both demonstrated that countries with less press freedom have fewer reports of terrorist incidence. In this study zeros could also result if the attacks are not being reported, another possible result of limited press freedom. This is a possible outcome because the study is using the GTD, a data source based on information from news reports, for the dependent variable (LaFree and Dugan 2007).

Collinearity

One of the first steps in this analysis was to generate a list of factors identified by the literature as having a recognized impact on the dependent variable, terrorism. These factors were to be used as explanatory variables. The study identified the following factors: level of democracy, regime duration, population size, level of economic development, level of economic inequality, and dominant religion (Abrahms 2008; Borum 2004; Crenshaw 1981; Crenshaw 1990; Enders and Sandler 1999; Eubank and Weinberg 1994; Eubank and Weinberg 2001; Meernik 2005) to be potentially useful as explanatory variables. Using these factors with base count as the key explanatory variable, the negative binomial regression model provided a reasonably robust analysis which indicated that the number of installations, economic inequality, population size, and political competitiveness all have statistically significant effects on the incidence of terrorism (see Table 3.1). This analysis supports Hypothesis 1, the number of bases in a country/year is negatively associated with the number of attacks in a country/year.

[Table 3.1 about here.]

On the negative side however, the correlation matrix for this design indicates a substantial level of correlation among the variables (see Table 3.2). Both Variance Inflation Factor (VIF) and auxiliary regression are used to check the model for collinearity. The VIF scores were relatively low, less than two in most cases, but auxiliary regressions identify that the base count variable has collinearity issues with some of the control variables. Through a process of removing and exchanging explanatory variables to eliminate the collinearity a new design was developed. This

design has only three additional explanatory variables; percent of Muslim, income

inequality, and population.

[Table 3.2 about here.]

The base presence data are examined to see if the collinearity problem exists

with this key explanatory variable as well. The base presence variable is a dummy

variable developed from the base count data. It is coded "0" if there is no base in a

country in a year and "1" if there is a base. The more robust model with base presence

exhibited collinearity issues as well. Ultimately, the three explanatory variables which

emerged previously were identified as useful with the presence key explanatory

variable. The VIFs are less than 1.1 and the auxiliary regressions do not indicate

collinearity. So, despite the robust literature on the factors which may be used to

explain terrorism, to remove indications of collinearity the study's models are limited to

the key explanatory variable and three additional explanatory variables. [20]

Countfit Model Comparison

Having determined the appropriate variables, the next step is to identify the

proper statistical model. Rather than run each of the models to evaluate them, the

author turned to a STATA module, Countfit, to determine the better choice. Countfit

takes user-specified variables and analyzes count data dependent variables with all four

of the primary count data models (Poisson, zero-inflated Poisson, negative binomial,

and zero-inflated negative binomial). It compares the model residuals (UCLA 2010)

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[20] To determine if this was a function of using bases rather than personnel as the U.S. presence metric the analysis was running using personnel numbers and the same collinearity issues were identified.

providing both a graphical and numerical output. The numeric output provides

information on several different measures of goodness of fit for the models, and

suggests which model is preferred over the others.

A check of the Countfit graphical results (see Figure 3.1) supports the assessment

that the negative binomial model is a better fit than a Poisson model. The Poisson

Regression Model (PRM) and the Zero-Inflated Poisson Regression Model (ZIP) both

have significantly greater deviations from the observed data than the Negative Binomial

Regression Model (NBRM) or the Zero-inflated Negative Binomial Regression Model

(ZINB). However the analysis does not indicate any appreciable difference between the

NBRM and the ZINB. Both the NBRM and the ZINB have slight over-predictions of

"zeros" and slight under-predictions of "ones." The only model which is better at

predicting zeros is the ZIP, but it is significantly worse at all other values.

[Figure 3.1 about here.]

An examination of the numerical results of the Countfit module, Appendix C,

indicates that the Zero Inflated Negative Binomial model provided slightly better results

than the non-zero inflated model. The final comparison table suggests that the ZINB

model is preferred to the NBRM by all measures; AIC, BIC and Likelihood and should be

selected as the model.

Zero-inflated Negative Binomial Model (ZINB) Limitations

The result of the Countfit assessment is that a zero inflated negative binomial

model with percentage of Muslims, income inequality, and population as explanatory

variables is the most appropriate choice from among the identified models. In addition,

using freedom of the press to explain excess zeros provides the best fit for the data.

However, the ZINB model has some limitations when used for this study's purposes. A

ZINB model cannot be used with the panel data operators in Stata. This means it does

not provide a direct method for evaluating the within-country correlation of the data.

One check to evaluate whether this should be a concern in the analysis is to run the

ZINB model with cluster function, clustering on country, to compensate for the

relationships inherent in collecting country level data across time.

The non-clustered analysis using base presence as the key explanatory variable

provided promising results (see Table 3.3). Base presence, percentage of Muslims, and

GDP are all statistically significant. Base presence is negatively associated with attacks,

just as posited in Hypothesis 1. However when the analysis was run with the data

clustered by country, the standard errors are much larger and, more importantly, only

"percentage of Muslims" has statistical significance (see Table 3.3). This indicates that

results from the ZINB model are not comparable to those from panel data analysis. An

additional problem with the ZINB model is that there is no easy way to compensate for

the temporal issues; Stata does not permit time operators when using a ZINB model.

This is an important limitation. Azam and Thelen (2010) emphasize the importance of

time series and cross-sectional data when attempting to relate policy with terror

attacks, in no small part because policy tools need to operate over time.

[Table 3.3 about here.]

Since the margin of preference for the ZINB over the NBRM is so slight, and since

the NBRM cannot be used with the panel data functions, including time operators, the

results of the Countfit comparison notwithstanding, the NBRM must be considered the better model for this study. Therefore, the study uses logistical regression (logit) panel data analysis with a negative binomial family for the attack count data, and with a binomial family for the attack incidence variable.

Summary

Quantitative analysis provides association between the explanatory variables and the dependent variable. It provides perspective regarding the relationship between the key explanatory variables and the risk of terrorist attacks, giving consideration to other explanatory factors. While the literature identified a significant number of explanatory factors to consider, collinearity issues limit this study's choice. Three additional explanatory factors which were compatible with the key explanatory variables were ultimately identified; percentage of Muslims, income inequality and population.

Model choice was determined for each of the dependent variables. In the final breakdown, panel data analysis with negative binomial logistical regression was selected for use when the dependent variable was count data, and panel data analysis with binomial logistical regression was selected for use when the dependent variable was binary coded. The models are run at the global and regional levels.

But this is only one part of the study. This quantitative analysis provides only an overview of the base-attack relationship, it is not country specific; it does not provide information on the effects of installations in individual countries. To better understand the country level relationship between U.S. installations and attacks and to provide

some country level "context-dependent knowledge" (Flyvbjerg 2006, 222), a qualitative

design is indicated. The study's qualitative design is explained in the following section.

Qualitative Design

The study's qualitative design consists of two parts. The first is an examination

of countries which removed the last base in the country or which permitted a base

when they did not have one using an intervention analysis methodology. The second

looks at Saudi Arabia and Qatar in detail with a comparative case study methodology.

Saudi Arabia eliminated the last base in the country while Qatar simultaneously greatly

increased the size of the base in its country. By examining terrorist attacks before and

after these intervention points, the study increases our understanding of the role the

bases had in the terrorists' decision matrix.

The qualitative design focuses on examining the hypotheses that removing the

last base or allowing the first base should be related to terrorist actions, generating an

increase in the case of the former and a decrease in the case of the latter. Since there

are only 18 such occurrences during the timeframe of the study, the most obvious way

to examine this relationship is to look at each of these individually. Therefore, the study

conducts an intervention analysis. Intervention analysis assesses how an event or

policy, addition or removal of a U.S. base, affects the subject of interest, in this case

terrorist attacks. The periods before and after the intervention are examined to see if

the intervention had an impact on the subject of interest. This study looks at

information surrounding the terrorist attacks which occurred before, during, and after

(as applicable) the U.S. base presence to determine if the change in base status could be reasonably be considered to be related to the incidence of terrorist attacks.

First Base Installed-Last Base Removed

The data for bases and terrorist attacks are the same as are used for the quantitative portion of the study. The GTD is used to identify which terrorist group, if any, claimed credit for the attack. The GTD is also used to determine if the presence of the U.S. base was mentioned as a factor in the attack decision. Since the GTD identifies the source of the information about the attack, those sources are used to evaluate the circumstances around the attack. A key factor is how chronologically close to the installation or removal of the base the attacks were. If the base is a precipitant factor, the attack should be in some reasonable chronological proximity to the change in base status.

As is typical for terrorist attacks, in many cases, no individual or group claims responsibility for the attacks (Wright 2009). The Global Terrorism Database has established an additional filtering mechanism "Doubt Terrorism Proper," in part as a response to the lesser amount of credit taking (LaFree and Dugan, 2009).[21] If a group laid claim to the attack, and further indicated that the attack was motivated by the U.S. base in any way, verification of the claim is suggested. It may not be an accurate claim. Groups have been known to claim credit for attacks they did not commit. Similarly, groups have given justifications for attacks, and those justifications were later

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[21] This mechanism is only available for incidents which occurred after 1997 but does cover the entire period of this study. (Lafree and Dugan 2009)

determined to be inaccurate. (Rapoport 1997). The State Department reports on the

history and actions of terrorist groups, the National Counterterrorism Center's

Worldwide Incidents Tracking System, and the GTD's historical analysis of terrorist

groups are consulted to evaluate if each identified claim is consistent with the group's

understood motivation, capabilities and objectives. Saudi Arabia and Qatar are not

covered in this section of the study, as they represent special cases and receive a more

detailed examination in a later section.

Case study – Saudi Arabia and Qatar

In its final analytical section, the study uses process tracing to conduct a

comparative case study of two countries. The specific cases for country level analysis

were identified using an information-oriented case selection strategy. Information

oriented case selection strategies are used to illuminate the deeper causes around an

issue and not to describe the indicators of the issue (Flyvbjerg, 2006). To gain deeper

knowledge about causality, random case selection is not productive; the case must be

selected based on what we already know. Information oriented case selection

strategies are particularly useful when looking at small samples which are chosen based

on expectations about their information content (Flyvbjerg 2006). Lacking any critical or

paradigmatic cases, the qualitative analysis focuses on a deviant case from the Middle

East, a region of specific interest to the U.S. for both for basing and terrorism.

This second part of the qualitative investigation is a Most Similar Design (MSD)

looking at Saudi Arabia and Qatar. A MSD is appropriate because these two countries

share many economic, cultural and political characteristics. In a MSD these factors can

be held constant ("considered irrelevant" [Lim 2006, 34]). These two countries were

selected because they constitute a special case. For all intent and purpose they

"swapped" a base around the mid-point of the study period.

In 2003, the U.S. and Saudi government made a joint decision to remove the last

U.S. base from Saudi Arabia (Garamone 2003). That same year the Qatari government,

in conjunction with the U.S., finished modernization and expansion of a Qatari facility

designated for U.S. use. In the fall of 2003, the primary functions of Prince Sultan Air

base in Saudi Arabia were moved to this new installation, Al Udied Air Base,[22] in Qatar

(Bosker 2003). An in depth look at this case may be informative because bases in the

Middle East, and Saudi Arabia in particular, were cited as the foundational cause of the

rise in terrorism worldwide (Johnson 2004; Pape 2005; Scheuer 2006; and others).

Additionally, some scholars claim the removal of the base and most of the troops from

Saudi Arabia in 2003 (only 200-400 remained behind in an advisory capacity), was a

direct result of a terrorist attack [albeit on the U.S. and not on the host country]

(Johnson 2004).

This component of the qualitative analysis begins with a brief discussion of these

countries' similarities, focusing on the permissive factors noted in the literature. These

data come from the same sources as were used in the other sections of the study. The

study evaluates terrorist attacks in these two countries following the method described

in the First Base In/Last Base Out section of the study. It looks at how many attacks

occurred before, during, and after (as applicable) the U.S. base presence. The study

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[22] While Qatar officially had the base the entire time frame of the study, the facility's function and size grew so dramatically in 2003 that Qatar is considered to have gone from zero bases to one base.

conducts a detailed examination of the attacks that took place in each country before and after the basing change. It looks particularly at whether the United States, or U.S. military or military bases, is mentioned as a precipitant factor for the attack(s). For any attacks when the base is mentioned as a precipitant cause, the State Department reports on the history and actions of terrorist groups, the National Counterterrorism Center's Worldwide Incidents Tracking System (WITS) and the GTD's historical analysis of terrorist groups are consulted to evaluate if the claim is consistent with the group's motivation, capabilities and objectives.

Content analysis of media and government reports surrounding the Saudi and Qatari basing decisions is conducted to identify factors which appear to have informed those decisions. The study uses the information from the content analysis to generate an analytic narrative (Falleti 2006) about the specific factors informing each country's basing decision. Most of the information for this analysis comes from secondary sources. This is because there are few accessible archives of Saudi or Qatari English language media coverage of events during the study period. Also, this study's author does not read Arabic.

The analytical narrative is explored looking for evidence of changes in policies or attitudes which could account for a change in attacks or numbers of attacks. This analysis includes evaluation of any evidence that the U.S. had influence in the policy change. By examining all of these factors, the study should improve our understanding of how the approximately 265 mile cross border movement of a U.S. base might be associated with terrorist attacks in these two countries.

Summary

This chapter has explained how the study examines the relationship between U.S. bases and terrorist attacks in a host country using a mixed methods, Quantitative/Qualitative, design. The literature identifies several factors which could be related to terrorist actions, but the majority of these are found to have collinearity issues with the key explanatory variables. Three factors are ultimately identified as explanatory variables percentage of Muslims, income inequality and population. Panel data analysis with negative binomial logistical regression is used when the dependent variable is count data and panel data analysis with binomial logistical regression is used when the dependent variable is the binary data. These models are run at the global and regional levels.

The qualitative study begins with an intervention analysis, looking at those countries which, during the period of the study, installed the first U.S. base or removed the only U.S. base. By examining information about the circumstance around the attacks, including what group took credit for the attack and its justification, the study assesses whether the change in U.S. base status can be understood as a precipitating cause of the attack.

Saudi Arabia and Qatar are examined as special cases because they "swapped" a base in 2003. This "swap" resulted in the removal of the last base in Saudi Arabia and a dramatic build-up at the only base in Qatar. Using a most similar case design with process tracing, these countries are compared to evaluate the effect of the U.S.

installation on the terrorist attacks which occurred during the study period. The next

chapters provide a discussion of the results generated by this mixed methods analysis.

Note: positive deviations show underpredictions.
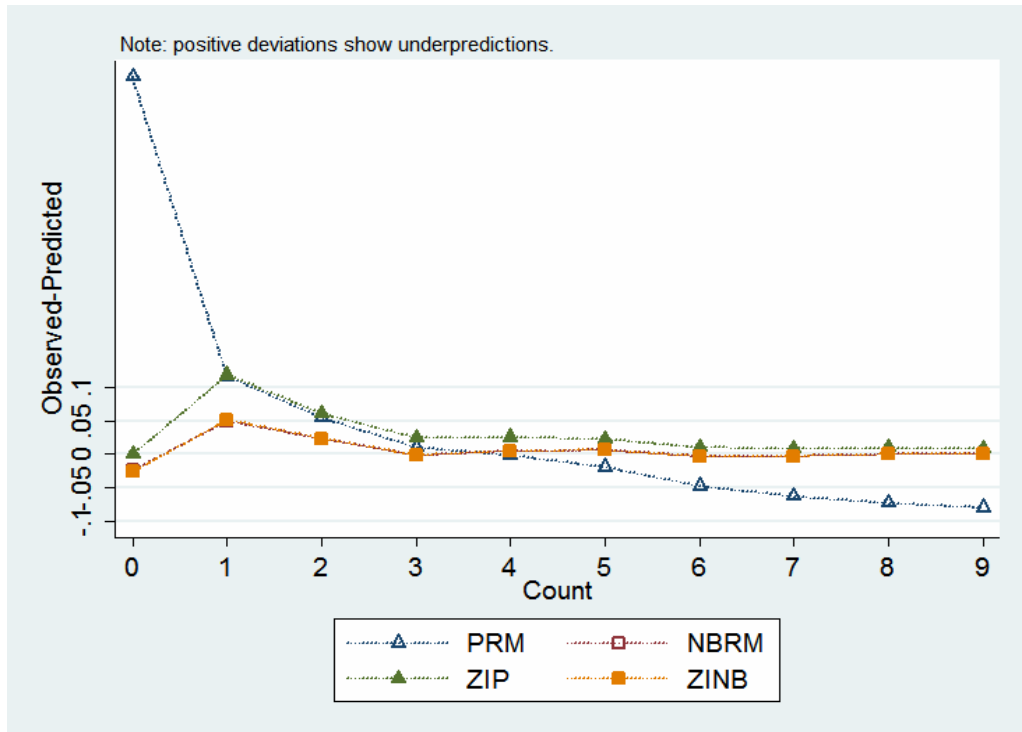
Figure 3.1
Countfit Model Comparison Graph

Table 3.1
Base Count Relationship with Number of Attacks
Negative Binomial Regression Model

Base Count Variable	Coefficient (Standard Error)
Number of U.S. Installations	-.005***
	(.001)
Percentage of Muslims	.001
	(.003)
Economic Inequality	.044**
	(.014)
Population	.000***
	(.000)
Political Competitiveness	1.24**
	(.601)
Government Duration	-.005
	(.004)
Gross Domestic Product	.000
	(.000)
Constant	-.557
	(.731)
* significant at p<.10 using a two tailed test ** significant at p<.05 using a two tailed test *** significant at p<.01 using a two tailed test NOTE: Auxiliary regressions demonstrated significant collinearly between the variables.	

Table 3.2
Base Count Correlation Matrix

	Base Total	Percent Muslim	Income Inequality	Population	Political Comp	Government Duration	GDP	Constant
Base Total	1.000							
Percent Muslim	.0675	1.000						
Income Inequality	-.0078	.4123	1.000					
Population	.0633	.0240	.1041	1.000				
Political Competitiveness	-.1050	.4600	.5968	.2251	1.000			
Government Duration	.3253	.1450	-.0866	.2631	-.1874	1.000		
Gross Domestic Product	-.2896	-.1803	-.2370	-.5310	-.7144	-.1309	1.000	
Constant	-.0547	-.5694	-.9259	-.3318	-.6110	-.1533	.3226	1.000

Table 3.3
Base Presence with Number of Attacks
Zero-Inflated Negative Binomial

	Non-Clustered	Clustered
Presence of U.S. Installation	.521*	.521
	(.284)	(.493)
Percentage of Muslims	.013***	.013***
	(.003)	(.005)
Economic Inequality	.032**	.032
	(.012)	(.023)
Population	.000**	.000
	(.000)	(.000)
Constant	.170	.170
	(.731)	(1.184)
* significant at p<.10 using a two tailed test ** significant at p<.05 using a two tailed test *** significant at p<.01 using a two tailed test		

Chapter 4
Quantitative Findings

Using a mixed methods design, this study looks at the relationship between the incidence or number of terrorist attacks and the presence or number of U.S. bases in a country from 1999 to 2008. The study is a sequential Quantitative-Qualitative design (Creswell 2009). The quantitative section of the study uses variables for incidence and counts of attacks and existence and counts of bases to create four statistical models. Model 1 addresses Hypothesis 1, the relationship between the number of attacks in that country and the number of U.S. bases in a country. Model 2 addresses Hypothesis 2, the relationship between the number of attacks in a country and the presence of one or more bases in the country. Model 3 addresses Hypothesis 3, the relationship between the occurrence of an attack in a country in a year and the number of U.S. bases in the country. Model 4 addresses Hypothesis 4, the relationship between the occurrence of an attack in a country in a year and the presence of one or more U.S. bases in the country. The qualitative section, the intervention analysis, examines the relationship between the presence of a base and the incidence of terrorist attack in countries which allow the first U.S. base or remove the last U.S. base, hypotheses 5 and 6. Separate quantitative and qualitative phases are necessary due to the complexity of the relationship between terrorist attacks and U.S. bases.

For the quantitative analysis, the dependent variable is terrorist attacks. The data are taken from the Global Terrorism database. The data are operationalized in two ways, as a count variable, and as a dichotomous variable—indicating occurrence of attack in a given country/year. The key explanatory variable is U.S. bases in the country.

These data are taken primarily from Base Structure Reports, the DoD's annual report to Congress on DoD owned or leased property overseas. The other explanatory variables are drawn from the terrorism literature. The study has a limited number of explanatory variables due to collinearity issues between the key explanatory variables and the factors which were to comprise the additional explanatory variables.

In the quantitative section, the study employs cross-sectional time-series analysis. The study uses a GEE logistical regression technique with 1st order autoregressive correlations and semi-robust standard errors to account for clustering on countries (see Zorn 2001) to evaluate how the existence of a base, or number of bases, affects the incidence of terrorist attacks. Two basic models, one for each type of dependent variable, have been developed. These models are run globally and then by geographic region. The geographic regions are identified by the areas of responsibility of the DoD's Geographic Combatant Commands.

Model 1: Number of Attacks and Base Count

Model 1 focuses on Hypothesis 1: The more U.S. military facilities a country hosts, the fewer the number of terrorist attacks which will occur. Table 4.1 presents the results of the model. When considered globally, the relationship between number of attacks and number of bases is significant and negative. When considered regionally, number of bases is negatively associated in two regions, NORTHCOM and PACOM, positively associated in one, SOUTHCOM, and not statistically significant in the remaining three, EUCOM, CENTCOM and AFRICOM. Therefore, at the global level,

Model 1 supports the Hypothesis. However at the next level of analysis, the regional

level, the results are ambiguous.

[Table 4.1 about here.]

The panel data analysis is run separately at the global level and then for each

region. For the global analysis, the coefficient for base count is -.005 and is significant at

p<.10 with a two-tailed test. When considered regionally, number of bases is negatively

associated with the number of attacks in two regions, NORTHCOM and PACOM,

positively associated in one, SOUTHCOM (both with and without Columbia), and not

statistically significant in the remaining three regions. Percentage of Muslims is

positively associated with number of attacks in NORTHCOM and PACOM but negatively

associated in SOUTHCOM without Columbia and EUCOM. As the literature suggests,

population is positively associated with the number of terrorist attacks in all regions

(except SOUTHCOM without Columbia), but the coefficient is extremely small (10^{-7} or

less) in all cases.

In NORTHCOM, all the variables are statistically significant at p<.01 with base

count being negatively associated and the other explanatory variables being positively

associated. However the observations in this region are limited. The region contains

seven countries but four of them are so small, less than 50,000 people, that Gini

coefficients are not available. This limits the data to 30 observations; ten years for each

of the three remaining countries: Canada, Mexico, and Cuba. This relatively small

dataset reduces the ability to drawn substantive conclusions from these results.

Results for SOUTHCOM, representing South America and the Caribbean, show

that base count is positively associated with number of attacks in this part of the world,

with a coefficient of .725 significant at p<.01. This is the only region with a positive

relationship between base count and number of terrorist attacks. The relative strength

of this relationship seems to be explained by the high concentration of attacks in a

single country. Columbia represents 999 of the 1159 attacks in the region over the

period of the study. When Columbia is removed from the analysis (SOUTHCOM2), while

the association remains positive, it is only one quarter as strong, with a coefficient of

.181 significant at p<.05. The only other significant variable is population and it is only

significant in SOUTHCOM with Columbia, not in SOUTHCOM without Columbia, at p<.1.

Base count is the only variable that is not statistically significant in the European

Command's, EUCOM, area of responsibility. This could be the result of the large

number of U.S. bases in the region. EUCOM is home to three of the top five base

hosting countries, Germany the United Kingdom and Italy.

Percentage of Muslims has a negative relationship with number of attacks in

EUCOM. One possible explanation for this may be the extremely open political system

in Europe. This region has a Political Competitiveness score that is twice the global

score, one and a half times the score for North America, and three or more times the

score of any of the other four regions. Perhaps this score indicates that the countries

provide the large number of Muslims in the region with a greater opportunity to

participate in the political process and making it less likely groups or individuals would

turn to terrorist methods to resolve political grievances. While political competitiveness

was dropped from this study because of collinearity with the basing variables, future research that is able to isolate political competitiveness from other factors of democracy, much like Sawyer (2005) was able to isolate freedom of the press from democracy, could prove fruitful.

In CENTCOM, Gini and population have statistically positive relationships with number of attacks. The coefficient for Gini is .099 significant at p<.01. This is the smallest coefficient for Gini in the model indicating that income inequality is less of a factor for this region than for others. While population is significant at p<.01 the coefficient is so small, 3.54e-08, as to make it inconsequential.

In AFRICOM, only population has a statistically significant association with number of attacks. As with all the other regions, the coefficient, 2.58e-08 is so small that the association is almost meaningless.

All four explanatory variables are significant in the PACOM region. Number of U.S. bases is negatively associated with number of attacks -.015 at p<.01, while the other variables are positively associated; percent of Muslims .014 at p<.05, Gini .181 at p<.01, and population 2.61e-09 at p<.01. The positive association of percentage of Muslims with number of attacks makes PACOM different from the other regions with the exception of NORTHCOM. This association could be the result of the fact that the two countries in the region with the highest percentage of Muslims, Indonesia and Bangladesh, each suffer from a significant number of terrorist attacks.

In summary, as hypothesized, base count is significantly negatively associated with number of attacks at the global level, and in two of the six regions. In three of the

regions, the relationship is not statistically significant. SOUTHCOM is the only region

where number of bases is positively associated with number of attacks, counter to the

hypothesis. This positive association could be the result of the fact that a significant

number of the bases in the region have a counter-drug mission (Lindsay-Poland 2004)

and many of the terrorist attacks are conducted by organizations related to the drug

trade (U.S. State Department various). Population is significantly associated with

number of attacks globally and in every region, but the extremely small coefficients

indicate that this variable has very little influence on the number of terrorist attacks.

Now the study will examine how the number of attack in the host country is associated

with the presence of bases.

Model 2: Number of Attacks and Base Presence

Model 2 evaluates the hypothesis that countries which host a U.S. military

facility will have fewer terrorist attacks than countries which do not host a U.S. facility,

Hypothesis 2. Table 4.2 presents the results of the model. The results are not

significant globally. Regionally, the key explanatory variable is negatively associated in

two regions, NORTHCOM and PACOM, positively associated in one, SOUTHCOM, and

not statistically significant in the remaining three EUCOM, CENTCOM and AFRICOM.

When Columbia is removed from consideration in SOUTHCOM, the results for that

region are no longer statistical significant.

[Table 4.2 about here.]

Model 2 employs the same dependent variable, the number of attacks in a

country/year, as the previous model. It uses a different key explanatory variable,

presence of a U.S. installation rather than a count of installations. All country/years

which have a count of one or greater for bases are coded "1" and those with a count of

zero are coded "0." The analysis is done in the same manner as in the previous section.

A GEE regression model is run using negative binomial family with a logit link.

At the global level, all factors except for the key explanatory variable are

positively associated with the number of attacks. This indicates that, when examined

globally, the presence of a U.S. base is not significant related to the number of attacks in

a county, refuting the hypothesis. Percentage of Muslims has a coefficient of .014 at

$p<.05$, Gini a coefficient of .034 at $p<.05$ and population a coefficient of 8.63e-09 at

$p<.001$. This lends support to the literature which suggests that increases in the

amounts of these structural factors are associated with increases in numbers of terrorist

attacks.

In NORTHCOM, again all the variables are significant; with base presence being

negatively associated with number of attacks, -1.41 at $p<.01$. However, economic

inequality changes from a positive relationship in the base count model to a negative in

this base yes/no model. This is a function of Mexico, with its relatively high Gini score

losing importance in the analysis because it has several years of multiple attacks which

are represented by a "1" in Model 2.

For SOUTHCOM, the presence of a U.S. base has a strong positive relationship

with the number of attacks 2.59 at $p<.01$, but, when Columbia, with its significant drug

trafficking issues, is removed, the relationship is no longer significant. This lends even

more credence to the idea that U.S. bases in the region are associated with the number

of terror attacks in this region in part because of their counter-drug mission. Gini is

significant and positive in SOUTHCOM in Model 2, .168 at p<.10 but it is not significant

when Columbia is removed. This demonstrates the affect that Columbia's high number

of attacks in comparison to the rest of the countries in the region has on regional

results.

All variables except the base presence variable are significant, with percentage

of Muslims demonstrating a negative relationship, -.014 at p<.05, in EUCOM. In

CENTCOM, Gini and population have statistically positive relationships with number of

attacks. In AFRICOM, only population has a statistically significant association with

number of attacks. All four explanatory variables are significant in the PACOM region

with presence of U.S. bases having a negative association, -1.95 at p<.01, while the

others variables are positively associated.

In summary, base presence is not associated with number of attacks at the

global level. However, at the regional level, base presence is negatively associated with

number of attacks, in two of the six regions, NORTHCOM and PACOM, supporting the

hpothesis. In three of the regions, EUCOM, CENTCOM and AFRICOM the base-attack

relationship is not statistically significant. SOUTHCOM with Columbia included is the

only region where presence of bases is positively associated with number of attacks,

2.52 at p<.01, counter to the Hypothesis 2. When Columbia, with its regionally large

number of attacks and bases, is removed, the association is no longer significant.

Population is significantly associated with number of attacks globally and in every

region, but the relationship is very small. Gini is significant globally and in every region except AFRICOM.

Model 3: Incidence of Attacks and Base Count

Model 3 evaluates Hypothesis 3: The more U.S. military facilities a country hosts the less likely a terrorist attack will occur in a given year. The results are not significant globally. Regionally, the association is positive in one region, SOUTHCOM, negative in one region, NORTHCOM, and not significant in the remaining four regions. And again, when Columbia, a country with a disproportionate number of bases, is removed, the statistic is not significant. NORTHCOM provides the negative association in model, as it does throughout the study. However, because the region represents only three countries, the information is not useful for generalization.

Model 3 examines how the number of bases is related to the incidence of attack. Incidence of attack is a dummy variable, coded "1" if an attack occurred in a country/year and "0" if no attack occurred. These are not count data, so logistical regression is an appropriate method to analyze them. A GEE binomial regression model is run using Stata's panel data analysis function with a binary family and a logit link to analyze this dependent variable. Just as with the previous models, Model 3 is run at the global level, and then run for each region. Table 4.3 presents the results of the model.

[Table 4.3 about here.]

At the global level, percentage of Muslims is the only significant relationship to incidence of attack, .006 at p<.05. In NORTHCOM, base count and population are associated with incidence of attack, with base count having a negative association, -1.07

at p<.01. Again care must be taken when using statistics from NORTHCOM because of the limited source data.

SOUTHCOM has the only significant positive relationship between bases and attacks, .759 at p<.05. However, when Columbia is excluded, the relationship is no longer significant. EUCOM has no significant indicator except population. Income inequality is positively associated with incidence of terrorist attack in CENTCOM, .109 at p<.10, as is population. In the PACOM region none of the variables are significant. PACOM is the only region where population does not have statistical significance.

Overall Model 3 does not support Hypothesis 3 at the global level but it does not counter it either. NORTHCOM supports Hypothesis 3 with its negative association and the SOUTHCOM region's positive association between incident of attack and base count is the only counter. Potential reasons for this were discussed above.

Model 4: Incidence of Attacks and Base Presence

The last model evaluates Hypothesis 4: Countries which host a U.S. military facility will have a lower incident of terrorist attacks than countries which do not host a U.S. facility. In model 4, there is no significant relationship between the key explanatory variable and the dependent variable globally or in any of the regions.

Again, because the dependent variable is not count data, a binomial regression model is run using GEE logistical regression with a binomial family and logit link. Just as with the previous models, Model 4 is run at the global level and then run for each region. Table 4.4 presents the results of Model 4. There are no results for the NORTHCOM region due to missing predictions.

[Table 4.4 about here.]

Model 4 provides the fewest significant indicators and provides no negative associations. The base presence variable is not significant globally or in any region. However, the percentage of Muslims is significant at the global level, .006 at p<.05. There are no results for NORTHCOM. In SOUTHCOM only percentage of Muslim is significant, .065 at p<.05. This is the only model where this factor was positively significant in this region. However, again when Columbia is removed the variable is no longer significant. Population and percentage of Muslims are significant in EUCOM, 2.41e-08 at p<01 and .006 at p<.05 respectively. Just as was the case with SOUTHCOM, this is the only model where percentage of Muslims was positively significant for this region. In CENTCOM, Gini and population are significant, as they had been in all of the other models. In AFRICOM only population is significant, as it had been in the three other models. For PACOM there are no significant variables.

Model Results Compared

When the models are compared side by side to see how the outcomes relate to each other, the study finds an interesting phenomenon. When examining incidence of attack—did an attack occur in a country—as the dependent variable the results are generally similar for the two key explanatory variable models. Starting regionally, NORTHCOM only has results for one of the models so it cannot be compared. The results for three of the regions are identical. In CENTCOM, income inequality and population are significant in both models and in AFRICOM population is the only significant factor in both models. PACOM has no significant factors in either model.

EUCOM and SOUTHCOM do show some variance between the models. SOUTHCOM

including Columbia is the only region which has major differences with number of bases

and population being significant when counting bases, and only percentage of Muslims

being significant when looking at base presence. EUCOM has population significant in

both models but percentage of Muslims is significant when counting bases and not

when looking at base presence. Globally, Percentage of Muslim is positive and none of

the other variables are significant for both models. So for incidence of attacks the

models generally provide the same results regionally and globally, with the exceptions

noted above.

However, when the dependent variable is number of terrorist attacks, the two

key explanatory variables, base count and base presence, generate similar results at the

regional level but very different results at the global level. The only differences found in

the regional results are a change in the direction of Gini in NORTHCOM and a couple of

significance changes in SOUTHCOM. Gini was significant in SOUTHCOM with Columbia

when looking at presence of a base and not went counting bases. SOUTHCOM without

Columbia had no significant factors when look at base presence however number of

bases and percentage of Muslims were significant when counting bases.

At the global level the results are extremely different between the models. In

both models population is significant; but in the base count model, base counts is

negative and significant and percent of Muslim and income inequality are not

significant. For the base presence model percent of Muslim and income inequality are

significant and base presence is not. This virtual reversal of results of the global

analysis, particularly given the relative consistency of the regional results, was puzzling. To determine if regional similarity and global discontinuity when looking at number of attacks represents a substantive concern, additional analysis is required.

A more detailed look at the data reveals that when examining the attack count variable, while the signs and significance held steady between the two base variables there is a change of coefficient size. In PACOM for example, while the coefficient for the key explanatory variable is significant and negative in both models, the coefficient for base presence, 1.951, is much larger than the coefficient for base count .015, both significant at $p<.01$. EUCOM demonstrates a like change in coefficient size although it is not significant in either model. The most noticeable difference between the key explanatory variables in models is data range and distribution. That would seem suggest that this is an area which should be examined.

Count Distribution Dilemma

The only model which demonstrated a significant relationship between basing and attacks at the global level was the first, number of attacks related to number of bases. This association was negative. While this supports the study's Hypothesis 1 this finding is somewhat unsatisfying in no small part because the rest of the results in the study demonstrate some level of cross-model consistency and this statistic does not. This section of the study is an attempt to identify why this result is inconsistent with the rest.

Statistical analysis is used to uncover the mathematical relationship between two variables. For statistical analysis to interpret this relationship, one or both of the

factors under consideration should change. For the most useful results, the variables

should change in relation to each other, and in a manner that is applicable to the level

of analysis of the study. If the variables change but the changes are not related at the

appropriate level, then the analysis is suspect. In this study, while both count variables

have broad ranges and demonstrate a considerable level of variation, the extremes are

not in the same countries. This lack of relationship between the count variables may be

the factor that is impeding this study's ability to draw satisfying conclusions particularly

at the global level.

The differences this study found when conducting analysis of the count

dependent variable, or using a count key explanatory variable, may be a function of the

relationship between the distribution of the count data and the other variables. The

attack data, Table 4.5, have 115 unique values. However, 57% (959/1670) of the

observations are 0 and 57% (410/711) of country/years with attacks have 5 or fewer

attacks. This means that 82% of total country/year attack observations are 0-5. This

82% of country/years only accounts for 3.4% (861/25125) of the attacks. The 18% of

country/years which have more than 5 attacks represent 96.6% (25125/25986) of the

attacks in the study period. In fact, there are 38 country/years which have 100 or more

attacks and this 2.2% of the country/years represent 61% of the attacks.

The same distribution issue is evident when the key explanatory variable is a

count. In the base count data, Table 4.6, 74.8% (1241/1658) of the observations have a

0 value for U.S. base, there is not a base in that country/year. For the remaining

country/years, there are 53 unique values but 88.2% (367/416) of country/years with

bases have 21 or fewer bases. The 49 country/years with more than 21 bases represent

seven countries and 81% (6249/7705) of the base total. The distribution when the two

variables are combined reveals an even greater disconnect.

The 33 country/years which have more than 100 attacks (Iraq and Afghanistan

years were removed because there is no basing data for those countries in these years)

have a base count of only 37. Those country/years account for 50% of the attacks

during the period yet only 2% of the bases. The 301 country/years that have 96.6% of

the attacks have just 22.2% (1715/7705) of the bases. Approximately 57% of the attacks

occur where there are no bases.

The statistics for the basing data are not any better. The 49 country/years which

account for 81% (6249/7705) of the base count represent only 1%, 184 of the 18000[23]

attacks in the study. The 367 country/years with at least 1 but less than 21 bases make

up 88.2% of the non-zero base observations but represent only 19% of the base count

and only 10% of the attack numbers. 29% of the bases are in locations where there are

no terrorist attacks.

As previously mentioned, a major difference between this study and the rest of

the literature is its focus on installations rather than personnel. Even though the study

stands virtually alone in use of this measure, it does not stand alone in facing this

distribution problem. Logic dictates that the distribution issue should also affect studies

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[23] Attacks in Iraq and Afghanistan were removed for this calculation because there is no data on base
numbers for those countries after 2003. It should be noted that there are estimates of 500-700 bases in
Iraq and 300-500 in Afghanistan since 2003. Both of those countries have significant terrorist attack
numbers (200-3200) during that time frame which would create data points off the top of the chart had
accurate data been available.

which use personnel numbers because the majority of the people should be where the majority of the bases are. To examine this, personnel data is needed.

The personnel information is taken from the Worldwide Manpower Distribution by Geographical Area a quarterly report by the Department of Defense, Defense Manpower Data Center Statistical Information Analysis Division. This report provides "summary data on the worldwide distribution of Department of Defense (DoD) active duty military…" (Defense Manpower 2005, Intro). The numbers were taken from the December 31st report for each year, and represent a snapshot of that day. The study will use the actual number of personnel in the report as the measure for a "personnel count" variable.

Because, just as with the base count measures, accurate unclassified data are not available for some countries, notably Iraq and Afghanistan after 2002, those countries will not be included in the "personnel count" analysis. Additionally, counts for all personnel directly supporting the wars in Iraq and Afghanistan are combined into totals for the war effort and are not listed in the country in which the individuals are deployed (DMDC multiple). This results in some underreporting for a small number of countries, but it is not possible to identify which ones or the magnitude of the underreporting. Because this would be a relatively consistent number of people, the author is not concerned about the discrepancy.

Scatter plots show that the distribution of personnel count data (see Figure 4.1) over the period of this study is similar to that of the base count data (see Figure 4.2). While the personnel count variable (see Table 4.15) has significantly fewer zeros than

the base count variable (see Table 4.14), those zeros are replaced with small numbers.

Over 95% of the base count zeros which are replaced are replaced with personnel

counts of less than 100. Considering the range of personnel count is 0-74,745, this small

change does not have a large impact on global level analysis.[24] Therefore, the same

methodological difficulties caused by the base count distribution would be present in

models using personnel count.[25]

[Figure 4.1 about here.]

[Figure 4.2 about here.]

Therefore, at the global level, the uneven distribution of the numbers of attacks

and bases or personnel seems to generate a situation where models using counts of

these factors cannot be used to aid in an understanding of terrorist attacks which are

also unevenly distributed. This is particularly true if these numbers are used in

conjunction with the other variables chosen to control for permissive factors which

change in every country. It may be possible to identify "outliers" in the count variables

allowing for an examination of the concentration of data points at the bottom left

quadrant of the chart; however, that may not provide a valid sample for analysis.

This distribution dilemma should be understood as a significant methodological

problem for interpreting the results of designs using either base or personnel numbers

in global level analysis of terrorist attacks. When writing about the global problem of

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[24] At the global level analysis with personnel count returned the same results as analysis with base counts with the exception that when examining Incidence of Attack, Percentage of Muslims was positively associated when using personnel count and was not significant when using base count.

[25] The same does not hold if personnel are not counted but rather coded to establish presence. If U.S. presence is coded "1" for every country where the U.S. has people even if there is no installation, globally a positive association is found for U.S. presence and both number and incidence of terrorist attack.

U.S. military intervention, it is common for authors to cite 1000s (Vine 2009b) or even the more specific 737 (Johnson 2008) for numbers of overseas bases. However without mentioning that 70-90%, respectively, are in four countries, Germany, Japan, South Korea and Italy, or that 30-42% of the bases are in one country, Germany, these authors are not presenting a balanced view of effects of basing.[26]

The same methodology difficulties affect more scholarly articles with a global level of analysis (e.g. Meernik 2005). The relationship between number of bases or number of personnel in a country and any other issue is inherently collinear with country specific factors from Germany, Japan, South Korea and Italy; that is where the bases are. Studies that need to consider number of bases, or personnel, in conjunction with data collected at the country level, like GDP, Gini, population, terrorist attacks, government duration, must find a design to compensate for the effects arising from the skewed distribution of the military data.

Summary

Ultimately, the quantitative research found support for only one of the hypotheses at the global level, Hypothesis 1: The more U.S. military facilities a country hosts, the fewer terrorist attacks will occur. At the global level, the null hypothesis could not be rejected for any other hypotheses. However, the distribution dilemma existent in the count data, particularly at the global level, limits the importance of this finding.

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[26] Johnson does reference "huge concentrations of American military might in Germany, Italy, Japan, and South Korea" (p 3) in one line of his article.

Regionally the results were somewhat scattered. In NORTHCOM the relationship between bases and attacks was negative for all models with results. So for that region, three of the four null hypotheses can be rejected (there were no result for Hypothesis 4). However, in this study NORTHCOM was only represented by three countries, Canada, Mexico, and Cuba so the importance of this result is limited. PACOM supports hypotheses 1 and 2, both count of bases and presence of bases are negatively related to number of attacks. However, there is no relationship between bases and incidence of attack in that region. In SOUTHCOM, counter to hypotheses 1, 1a, and 2, there is a positive relationship between bases and attacks. However, when Columbia is dropped because it is a statistical outlier, the only significant relationship in the region is the positive one between number of bases and number of attacks. The relationship between the counter-drug mission of most of the bases in SOUTHCOM and the drug cartel's involvement in terrorist acts may explain this positive relationship. The bases may be the result of the number of attacks, they are in place to respond to those who are conducting the attacks; they are not the cause of the attacks. EUCOM, CENTCOM, and AFRICOM demonstrate no relationship between bases and attacks in any of the four models.

Tables
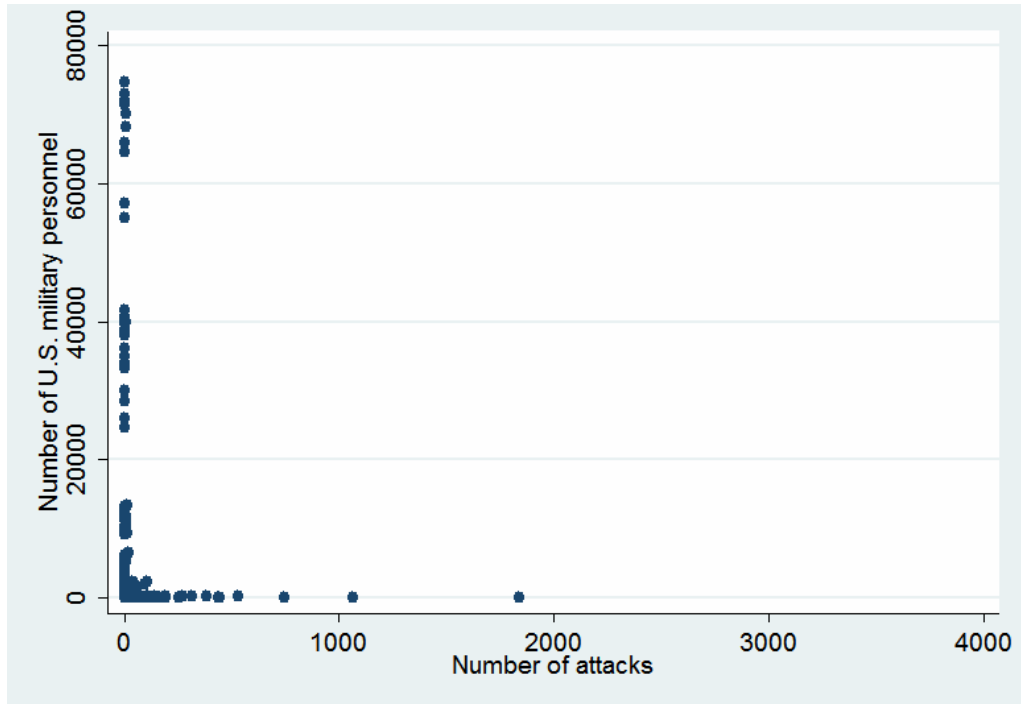
Figure 4.1
Scatter plot – Number of Personnel and Number of Attacks
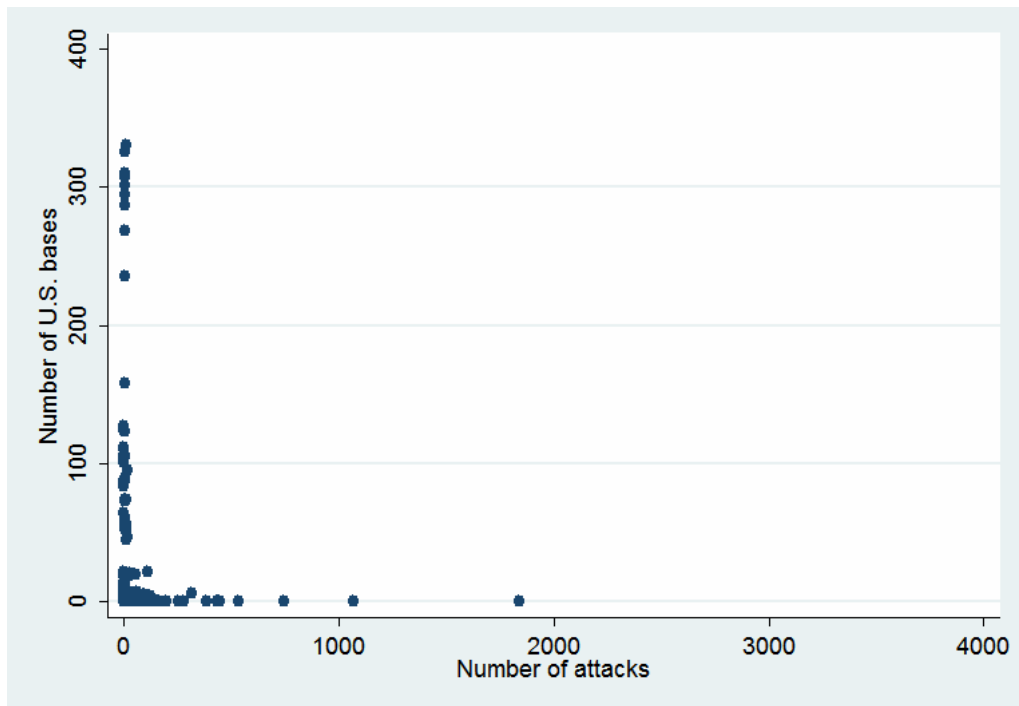
Figure 4.2
Scatter plot – Number of Bases and Number of Attacks

Table 4.1
Model 1: Number of Attacks and Base Count
Neg. Binomial Regression Model

Number of Attacks								
	GLOBAL	NORTHCOM	SOUTHCOM 1	SOUTHCOM 2	EUCOM	CENTCOM	AFRICOM	PACOM
Number of U.S. Bases	-.005* (.003)	-1.167*** (.027)	.751*** (.049)	.181** (.084)	-.002 (.003)	-.232 (.146)	.061 (.242)	-.015*** (.004)
Percentage of Muslims	.002 (.005)	17.134*** (1.671)	-.016 (.111)	-.151* (.088)	-.014** (.005)	-.010 (.025)	.012 (.007)	.014** (.005)
Economic Inequality	.009 (.016)	.441*** (.002)	.096 (.069)	.015 (.041)	.296*** (.078)	.099*** (.037)	-.027 (.041)	.181*** (.039)
Population	1.10e-08*** (7.30e-10)	3.80e-07*** (3.50e-08)	7.87e-09* (4.75e-09)	4.90e-09 (3.55e-09)	2.26e-08** (8.05e-09)	3.54e-08*** (4.87e-09)	2.58e-08*** (6.95e-09)	2.61e-09*** (6.39e-10)
Constant	1.302** (.711)	-59.190*** (6.104)	-5.519 (3.684)	-1.167 (2.236)	-8.412*** (2.350)	-2.176 (1.669)	2.046 (1.506)	-4.823*** (1.485)
n n groups	1558 157	30 3	220 22	210 21	420 42	168 18	480 48	240 24
** significant at p<.10 using a two tailed test ** significant at p<.05 using a two tailed test *** significant at p<.01 using a two tailed test								

Table 4.2
Model 2: Number of Attacks and Base Presence
Neg. Binomial Regression Model

Number of Attacks								
	GLOBAL	NORTHCOM	SOUTHCOM 1	SOUTHCOM 2	EUCOM	CENTCOM	AFRICOM	PACOM
Presence of U.S. Bases	.455 (.587)	-1.41*** (181)	2.591*** (.799)	.741 (.548)	.241 (.483)	1.11 (.965)	-.123 (.530)	-1.951*** (.510)
Percentage of Muslims	.014** (.006)	.624*** (.036)	.129 (.189)	-.124 (.082)	-.014** (.005)	.039 (.025)	.012 (.007)	.027*** (.007)
Economic Inequality	.034** (.016)	-.105*** (.022)	.168* (.096)	.021 (.042)	.306*** (.077)	.291*** (.043)	-.0276 (.041)	.157*** (.041)
Population	8.63e-09*** (7.38e-10)	4.39e-08*** (7.50e-09)	1.19e-08** (5.70e-09)	5.15e-09 (3.69e-09)	2.04e-08** (6.68e-09)	4.14e-08*** (5.69e-09)	2.61e-08*** 6.96e-09)	2.34e-09*** (6.45e-10)
Constant	.116 (.963)	1.769*** (.347)	-9.623* (5.415)	-1.587 (2.221)	-8.805*** (2.291)	-13.531*** (3.217)	1.591 (1.974)	-3.774** (1.516)
n n groups	1570 157	30 3	220 22	210 21	420 42	180 18	480 48	240 24
	** significant at p<.10 using a two tailed test ** significant at p<.05 using a two tailed test *** significant at p<.01 using a two tailed test							

Table 4.3
Model 3: Incidence of Attack and Base Count
Binomial Regression Model

Incidence of Attack								
	GLOBAL	NORTHCOM	SOUTHCOM 1	SOUTHCOM 2	EUCOM	CENTCOM	AFRICOM	PACOM
Number of U.S. Bases	.005 (.005)	-1.07*** (032)	.759** (.340)	.669 (.429)	.010 (.007)	.013 (.094)	.203 (.488)	.000 (.005)
Percentage of Muslims	.006** (.002)	3.341 (2.27)	.059 (.105)	.047 (.103)	.006 (.006)	-.001 (.021)	.003 (.005)	.024 (.015)
Economic Inequality	.005 (.010)	-.070 (.067)	.096 (.070)	.091 (.069)	.065 (.049)	.109* (.062)	-.006 (.025)	.034 (.045)
Population	1.57e-08 (1.05e-08)	1.28e-07*** (4.90e-08)	1.18e-08* (6.76e-09)	1.16e-08* 6.41e-09	2.79e-08** (1.19e-08)	3.37e-08*** (1.19e-08)	4.67e-08*** (1.28e-08)	2.79e-09 (1.83e-09)
Constant	-1.072** (.488)	-7.301 (8.224)	-6.325* (3.666)	-6.018* (3.594)	-2.965** (1.486)	-4.273 (2.961)	-1.054 (1.427)	-1.825 (1.786)
n n groups	1558 157	30 3	220 22	210 21	420 42	168 18	480 48	240 24
	** significant at p<.10 using a two tailed test ** significant at p<.05 using a two tailed test *** significant at p<.01 using a two tailed test							

Table 4.4
Model 4: Incidence of Attack and Base Presence
Binomial Regression Model

Incidence of Attack	GLOBAL	NORTHCOM	SOUTHCOM 1	SOUTHCOM 2	EUCOM	CENTCOM	AFRICOM	PACOM
Presence of U.S. Bases	.231 (.252)		.935 (.767)	.656 (.836)	.266 (.427)	-.083 (.483)	-.035 (.995)	-.373 (.570)
Percentage of Muslims	.006** (.002)		.065** (.112)	.028 (.103)	.006** (.006)	.001 (.020)	.003 (.005)	.024 (.015)
Economic Inequality	.007 (.010)		.109 (.071)	.087 (.067)	.067 (.052)	.122** (.057)	-.006 (.025)	.031 (.045)
Population	1.69e-08 (1.04e-08)		1.33e-08 (1.03e-08)	1.16e-08* (7.04e-09)	3.21e-08*** (1.07e-08)	3.41e-08*** (1.18e-08)	4.72e-08*** (1.29e-08)	2.76e-09 (1.93e-09)
Constant	-1.222** (1.04e-08)		-6.921* (3.767)	-5.748 (3.511)	-3.096* (1.589)	-4.908* (2.745)	-1.056 (1.428)	-1.606 (1.783)
n n groups	1570 157		220 22	210 21	420 42	180 18	480 48	240 24

** significant at p<.10 using a two tailed test
** significant at p<.05 using a two tailed test
*** significant at p<.01 using a two tailed test

Table 4.5
Number of Attacks Frequency

Atks	Freq	%	Cum.	Atks	Freq	%	Cum.	Atks	Freq	%	Cum.
0	959	57.43	57.43	41	1	0.06	94.07	107	3	0.18	97.72
1	191	11.44	68.86	42	1	0.06	94.13	108	1	0.06	97.78
2	99	5.93	74.79	43	1	0.06	94.19	110	1	0.06	97.84
3	41	2.46	77.25	44	2	0.12	94.31	116	1	0.06	97.90
4	41	2.46	79.70	46	3	0.18	94.49	118	1	0.06	97.96
5	37	2.22	81.92	47	2	0.12	94.61	119	1	0.06	98.02
6	17	1.02	82.93	49	2	0.12	94.73	124	1	0.06	98.08
7	16	0.96	83.89	50	1	0.06	94.79	128	1	0.06	98.14
8	16	0.96	84.85	51	1	0.06	94.85	143	2	0.12	98.26
9	18	1.08	85.93	52	3	0.18	95.03	144	1	0.06	98.32
10	9	0.54	86.47	53	2	0.12	95.15	149	1	0.06	98.38
11	19	1.14	87.60	54	1	0.06	95.21	155	1	0.06	98.44
12	6	0.36	87.96	55	1	0.06	95.27	159	1	0.06	98.50
13	6	0.36	88.32	56	1	0.06	95.33	165	1	0.06	98.56
14	3	0.18	88.50	57	3	0.18	95.51	166	1	0.06	98.62
15	9	0.54	89.04	58	2	0.12	95.63	194	1	0.06	98.68
16	3	0.18	89.22	59	1	0.06	95.69	195	2	0.12	98.80
17	6	0.36	89.58	60	1	0.06	95.75	254	1	0.06	98.86
18	7	0.42	90.00	61	1	0.06	95.81	276	1	0.06	98.92
19	4	0.24	90.24	62	2	0.12	95.93	280	1	0.06	98.98
20	2	0.12	90.36	65	2	0.12	96.05	306	1	0.06	99.04
21	3	0.18	90.54	66	2	0.12	96.17	317	1	0.06	99.10
22	5	0.30	90.84	68	1	0.06	96.23	339	1	0.06	99.16
23	5	0.30	91.14	69	2	0.12	96.35	385	1	0.06	99.22
24	5	0.30	91.44	71	1	0.06	96.41	436	1	0.06	99.28
25	3	0.18	91.62	73	2	0.12	96.53	438	1	0.06	99.34
26	4	0.24	91.86	77	1	0.06	96.59	444	1	0.06	99.40
27	1	0.06	91.92	78	2	0.12	96.71	447	1	0.06	99.46
28	1	0.06	91.98	80	1	0.06	96.77	525	1	0.06	99.52
29	3	0.18	92.16	83	1	0.06	96.83	533	1	0.06	99.58
30	6	0.36	92.51	84	1	0.06	96.89	744	1	0.06	99.64
31	2	0.12	92.63	88	1	0.06	96.95	836	1	0.06	99.70
32	1	0.06	92.69	89	1	0.06	97.01	1041	1	0.06	99.76
33	2	0.12	92.81	91	2	0.12	97.13	1066	1	0.06	99.82
34	4	0.24	93.05	92	1	0.06	97.19	1222	1	0.06	99.88
35	4	0.24	93.29	93	1	0.06	97.25	1838	1	0.06	99.94
36	2	0.12	93.41	94	1	0.06	97.31	3256	1	0.06	100.
37	3	0.18	93.59	97	1	0.06	97.37				
38	2	0.12	93.71	99	1	0.06	97.43	Total 1,670			100.
39	3	0.18	93.89	100	1	0.06	97.49				
40	2	0.12	94.01	105	1	0.06	97.54				

Table 4.6
Number of U.S Bases Frequency

U.S. bases	Freq.	%	Cum.					
0	1,246	75.15	75.15		106	2	0.12	99.03
1	178	10.74	85.89		110	1	0.06	99.10
2	43	2.59	88.48		111	1	0.06	99.16
3	41	2.47	90.95		123	1	0.06	99.22
4	21	1.27	92.22		124	1	0.06	99.28
5	5	0.30	92.52		127	1	0.06	99.34
6	11	0.66	93.18		158	1	0.06	99.40
7	8	0.48	93.67		235	1	0.06	99.46
8	7	0.42	94.09		268	1	0.06	99.52
9	5	0.30	94.39		287	1	0.06	99.58
10	5	0.30	94.69		294	1	0.06	99.64
11	3	0.18	94.87		301	1	0.06	99.70
12	3	0.18	95.05		307	1	0.06	99.76
14	2	0.12	95.17		310	1	0.06	99.82
18	9	0.54	95.72		325	2	0.12	99.94
19	7	0.42	96.14		330	1	0.06	100.00
20	4	0.24	96.38		Total	1,658		100.00
21	10	0.60	96.98					
45	1	0.06	97.04					
47	1	0.06	97.10					
51	2	0.12	97.23					
52	2	0.12	97.35					
53	1	0.06	97.41					
54	2	0.12	97.53					
55	2	0.12	97.65					
56	1	0.06	97.71					
57	1	0.06	97.77					
59	1	0.06	97.83					
61	1	0.06	97.89					
64	1	0.06	97.95					
73	2	0.12	98.07					
74	2	0.12	98.19					
83	1	0.06	98.25					
87	3	0.18	98.43					
89	1	0.06	98.49					
95	1	0.06	98.55					
101	4	0.24	98.79					
105	2	0.12	98.91					

Table 4.7
Description of Variables—Global

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of Attacks	1670	15.560	113.067	0	3256
Incidence of Attack	1670	.425	.494	0	1
Number of Bases	1658	4.644	26.616	0	330
Presence of Bases	1670	.256	.437	0	1
Number of Personnel	1658	1114.519	6598.973	0	74745
Percentage of Muslim	1660	27.951	37.416	0	100
Income Inequality	1570	40.727	9.891	5.35	74
Population	1650	3.65e+07	1.32e+08	56100	1.33e+09
Gross Domestic Product	1550	1.55e+11	4.89e+11	1.85e+08	5.21e+12
Political Competition	1567	.207	.40557	0	1
Government Duration	1567	23.518	27.764	0	160
Freedom of the Press	1637	49.524	24.536	0	100

Table 4.8
Description of Variables—NORTHCOM

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of Attacks	49	.7755102	1.971308	0	10
Incidence of Attack	49	.2653061	.4460713	0	1
Number of Bases	49	1.244898	1.639749	0	7
Presence of Bases	49	.6938776	.4656573	0	1
Number of Personnel	49	184.7143	296.5967	0	1002
Percentage of Muslim	49	2.44898	3.942616	0	10
Income Inequality	29	37.28476	8.645882	30	52
Population	49	2.94e+07	3.88e+07	88767	1.06e+08
Gross Domestic Product	35	4.04e+11	3.60e+11	1.79e+09	8.71e+11
Political Competition	29	.3448276	.4837253	0	1
Government Duration	29	55.10345	47.0071	2	120
Freedom of the Press	39	40.84615	33.06416	7	96

Table 4.9
Description of Variables—SOUTHCOM

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of Attacks	221	5.244344	26.77251	0	317
Incidence of Attack	221	.3393665	.4745692	0	1
Number of Bases	221	.5429864	1.376494	0	11
Presence of Bases	221	.2533937	.4359418	0	1
Number of Personnel	221	44.49321	108.0162	0	953
Percentage of Muslim	221	.5882353	1.875111	0	7
Income Inequality	221	51.85493	5.998523	15	61.78
Population	221	1.92e+07	3.74e+07	75140	1.92e+08
Gross Domestic Product	210	7.64e+10	1.60e+11	7.04e+08	8.54e+11
Political Competition	211	.1895735	.3928956	0	1
Government Duration	211	22	19.21557	0	89
Freedom of the Press	221	39.74661	15.24584	11	94

Table 4.10
Description of Variables—EUCOM

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of Attacks	460	10.59783	56.18113	0	1066
Incidence of Attack	460	.4543478	.4984536	0	1
Number of Bases	460	11.28478	45.03607	0	330
Presence of Bases	460	.4130435	.4929166	0	1
Number of Personnel	460	2259.63	10017.86	0	74745
Percentage of Muslim	450	15.6	29.39888	0	100
Income Inequality	420	31.83284	4.956906	5.35	43.23
Population	440	2.02e+07	2.95e+07	56100	1.46e+08
Gross Domestic Product	426	2.46e+11	4.42e+11	1.26e+09	2.09e+12
Political Competition	400	.5375	.4992162	0	1
Government Duration	400	31.89	34.47243	0	160
Freedom of the Press	440	32.99091	22.28077	5	91

Table 4.11
Description of Variables—CENTCOM

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of Attacks	190	59.44737	302.6302	0	3256
Incidence of Attack	190	.5368421	.4999582	0	1
Number of Bases	178	.8202247	1.775933	0	9
Presence of Bases	190	.3947368	.4900855	0	1
Number of Personnel	178	348.4326	1010.704	0	6114
Percentage of Muslim	190	87.42105	13.89803	47	100
Income Inequality	180	37.27167	7.049664	30	60
Population	190	2.14e+07	3.43e+07	589575	1.66e+08
Gross Domestic Product	163	4.25e+10	5.60e+10	7.95e+08	2.52e+11
Political Competition	190	0	0	0	0
Government Duration	190	21.62105	21.63217	0	82
Freedom of the Press	190	72.97895	11.43695	45	100

Table 4.12
Description of Variables—AFRICOM

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of Attacks	490	4.589796	23.45027	0	444
Incidence of Attack	490	.3734694	.4842195	0	1
Number of Bases	490	.0346939	.2410365	0	2
Presence of Bases	490	.022449	.1482899	0	1
Number of Personnel	490	22.68776	158.8612	0	2190
Percentage of Muslim	490	39.73469	37.04293	0	100
Income Inequality	480	45.58979	9.165599	24	74
Population	490	1.66e+07	2.32e+07	513263	1.51e+08
Gross Domestic Product	476	1.21e+10	2.52e+10	1.85e+08	1.83e+11
Political Competition	490	.0408163	.1980667	0	1
Government Duration	490	10.61224	12.19896	0	57
Freedom of the Press	490	60.01837	18.88577	17	96

Table 4.13
Description of Variables—PACOM

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of Attacks	260	24.5	80.07378	0	744
Incidence of Attack	260	.4961538	.5009495	0	1
Number of Bases	260	8.326923	27.83454	0	158
Presence of Bases	260	.2423077	.4293059	0	1
Number of Personnel	260	2755.462	9546.703	0	41626
Percentage of Muslim	260	11.73077	24.14972	0	86
Income Inequality	240	39.32842	6.194812	25	52
Population	260	1.28e+08	3.11e+08	404365	1.33e+09
Gross Domestic Product	240	3.88e+11	1.01e+12	2.77e+08	5.21e+12
Political Competition	247	.1619433	.3691468	0	1
Government Duration	247	34.61134	32.6487	0	131
Freedom of the Press	257	50.20623	25.9418	0	100

Table 4.14
Cross Tabulation of Attacks and Bases

Incidence of Attack	Presence of a Base		
	0	1	Total
0	721	238	959
1	520	191	711
Total	1241	429	1670

Table 4.15
Cross Tabulation of Attacks and Personnel

Incidence of Attack	Presence of U.S. Personnel		
	0	1	Total
0	205	754	959
1	87	624	711
Total	292	1378	1670

Chapter 5
Qualitative Findings: First Base In –Last Base Out

This study examines how the incidence or number of terrorist attacks in a country is associated with the presence or number of U.S. military installations in that country during the first decade of the 21st century. This portion of the study is structured like an intervention analysis. An intervention analysis assesses how an event or policy, for this study the addition or removal of a U.S. base, affects the subject of interest, in this case terrorist attacks. The data in Table 5.2 provide no clear support for Hypothesis 5 or 6, that the addition of a base reduces the number/incidence of terrorist attacks or that the removal of the last base increases the incidence/number of terrorist attacks. In no case did the addition of a base change the incident of terrorist attacks. Those countries which had at least one attack prior to the base presence also had at least one attack during base presence. Those countries which had no attacks prior to the base presence had none while the base was present.

The study looks at the nexus of U.S. basing and terrorist attacks using a mixed method design. The study starts with a quantitative design, consisting of four models, as explained in chapter 4, and conducts statistical analysis at the global and regional levels using both count and presence data for the dependant and key explanatory variable. It then transitions to a qualitative design to gain a country level view of the relationship between the presence of a base and terrorist attacks. The timeframe, 1999-2008, was chosen because it was a dynamic period for U.S. basing policy. It represents a time when the international community's view of terrorist attacks was evolving as well.

The qualitative design focuses on Hypothesis 5, placing a U.S. base in country which does not have one will reduce the incidence of terrorist attack and Hypothesis 6, removing the last U.S. base in a country should increase the incident of terrorist attack. The periods before and after the intervention, in this study base status change, are examined to see if the intervention had an impact on terrorist attacks. The study identifies the instances when a U.S. base was added or removed from a country, and then examines the terrorist attacks in the countries in the same time period to try to understand the relationship. The goal is to determine if the change in base status can be understood as a precipitant factor in the terrorist attacks. As Richardson (2006) emphasizes, very little is known about how permissive and proximal factors interact before resulting in violence. That is why more in-depth study is needed.

The data for bases and terrorist attacks are the same as those used for the quantitative portion of the study. The GTD is used to identify which terrorist group, if any, claimed credit for the attack and also to determine if the presence of the U.S. base was mentioned as a factor in the attack decision when credit was claimed. The State Department reports on the history and actions of terrorist groups, the National Counterterrorism Center's Worldwide Incidents Tracking System, and the GTD's historical analysis of terrorist groups are consulted to evaluate if each identified claim was consistent with the group's understood motivation, capabilities and objectives.

First Base Installed-Last Base Removed

Table 5.1 identifies the countries which meet the criteria of having the last U.S. base removed from a country or having a U.S. installation established in a country

which did not have one. The number of attacks, number of years and then an average

of the number of attacks per year, are indicated for the period before the base (if any),

the period while the base was existent, and the period after the base was removed (if

any). Over the timeframe of the study, 13 countries provide 16 instances of this first

base in, last base out phenomena.[27] In three countries; Austria, Honduras, and

Uzbekistan, the only U.S. base was both established and removed within the study

period. As a result, these three countries make up 6 of the 18 occurrences.

Some may consider 15 countries a small sample. The total comes in part

because of the short time frame of the study, 10 years, which was driven in part by the

desire to have consistent data for the quantitative analysis and in part because the

basing structure does not change that radically that often. Additionally, when basing

structure does change, the adjustments are most often consolidations in countries

where several of installations exist. For example, during a big push to reduce the U.S.

overseas infrastructure during the middle years of this study, the Congressional Budget

Office (2004) study, *Options for Changing the Army's Overseas Basing*, focused on

making changes, primarily reducing installations, in Germany and South Korea. At the

time, these two countries contained 54% of U.S. military personnel overseas and 46% of

U.S. overseas installations in 2003 (CBO 2004, 6). The report does not include much

discussion of eliminating bases in countries where there were few or only one. Nor

does it seriously consider adding bases where there was none, with the exception of

countries in Eastern Europe. Even while 15 counties may seem like a small number, the

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[27] Saudi Arabia and Qatar are not counted here because they are examined in the next chapter.

15 countries account for about ten percent of the countries which had attacks in the study. The 15 countries also represent five of the study's six geographic regions. NORTHCOM is the exception.

The study found no substantive evidence that putting a U.S. base in a country which did not have one or removing the last U.S. base from a country has any affect on terrorist attacks in that country. The base removal statistics do show some variation. Three countries which had no attacks while the base was present had attacks after the base was removed. At the same time, three countries which had attacks while the base was present had none after it was removed. The two other countries had attacks both during and after the base presence. When looking at numbers of attacks, there are eight circumstances when the addition or removal of a base supports Hypothesis 5 or 6 and seven which refute them.[28] There are also three which present ambiguously. UAE had no attacks during the study period; Austria and Honduras had no attacks prior to and during base presence.

These generally inconclusive results at the country level mirror the "not statistically significant" result generally found at the global and regional levels in the study's quantitative models. In the following section, the circumstances around the attacks in the countries will be reviewed to assess if there is a base-attack relationship which may not be apparent in the numbers.

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[28] Uzbekistan is in both sets. It saw a decrease after the base was put in, confirming the hypothesis, but also a decrease when the base was removed refuting the hypothesis.

Country Specific Circumstances—Last Base Removed

In this segment, the study examines in more detail the five instances when the last U.S. base in a country was removed. Hypothesis 6 suggests that this should increase the number or incidence of terrorist attacks in the country.

France

France was host to a U.S. base from the beginning of the study period, 1999, until 2005. During that period, it suffered 54 terrorist attacks, not including attacks in Corsica (GTD 2009). Even after excluding attacks in Corsica, the majority of the attacks are credited to Corsican and Basque separatists. In none of the attacks was the U.S. military mentioned as a possible cause (GTD 2009). In the three years after the base was removed, 14 attacks were reported. These were generally conducted by the same groups which conducted attacks in the years the base was present. Again, neither the U.S. nor U.S. policy was mentioned by any of those who took credit for these attacks (GTD 2009).

Hungary

The only attack in Hungary during the study period occurred the same year that a basing agreement with the U.S. was established, 2008. The group which claimed responsibility, the Arrows of Hungarians National Liberation Army, a neo-Nazi national liberation organization, did not mention the U.S. presence or U.S. policy as a cause (WITS 2010). In 2009, the group conducted additional attacks against Socialist and Free Democrat politicians reinforcing the idea that their goals were founded in domestic

politics (Three 2009). Nothing about the group indicates that the U.S. base had any

influence on their actions.

New Zealand

There were four terrorist attacks in New Zealand during the study period, all of

which occurred prior to the official removal of the last U.S. installation. Three of the

attacks involved cyanide sent to Western embassies; the fourth was a threat to place

cyanide in the public drinking water (GTD 2009). The first attack was in December, 2001

but credit for the attack was not claimed until the second attack in February, 2003 (GTD

2009). The last attack was in March, 2003. The group threatened additional attacks

against the New Zealand Open and the America's Cup sailing competition. After the

February 2003 attack, the group asserted a goal of stopping the anticipated U.S. led

invasion of Iraq (GTD 2009).

While these attacks could be related to the military base, they seem more likely

to be related to U.S. foreign policy in general. The site was a U.S. Naval Observatory

which had been in operation since 1984. While still listed on the BSRs until 2003, Navy

records and press reports indicate the site was effectively closed in 1996 (Navy

Meteorology n.d.). While the attacks may be attributable to U.S. policy in Iraq, or U.S.

foreign policy in general, with no specific mention of the Navy Observatory site by the

terrorist group, and given that the site had been effectively closed for seven years when

the attacks occurred, it seems unlikely the site was the precipitant cause of the attacks.

Panama

The only attack in Panama during the study period occurred in the first year of the study, 1999, the year the base was removed from the country. The attack appeared to be directed at the Bolivian president who was visiting Panama at the time. There were three calls to his hotel threatening him and telling authorities about the presence of bombs (GTD 2009). No one claimed credit for the attack, which occurred 300 meters from the Bolivian president's hotel (GTD 2009). Needless to say, there was no mention of the U.S. facilities which had been scheduled for removal for years in any of the reports about this attack.

Venezuela

The U.S. presence in Venezuela was extremely small. The three U.S. Air Force sites, nine total buildings, did not meet the criteria to be listed individually in the BSR (BSR multiple). While there were a considerably larger number of attacks from 1999-2003, the four years the base was present, than in the years after the base was removed, none of the claims of responsibility provided any indication that the site played a factor in the violence (GTD 2009). The incidents were primarily attacks against political and religious targets. The attacks which occurred after the site was removed were fewer in number, and appeared to be motivated by the same desire for political and social reforms.

Country Specific Circumstances—Base Installed and Then Removed

This section will examine the three countries which not only allowed the first U.S. facility into the country, but also removed the facility during the study period.

Hypothesis 5 opines that after the base was allowed attacks should have gone down.

Then after it was removed, Hypothesis 6 suggests terrorist attacks should have gone up.

Austria

In Austria, there were no attacks in the one year prior to the installation of the base, or during the three years in which the facility was present (GTD 2009). The only attacks in the country during the study period occurred four years after the location was no longer listed on the BSR (BSR 2004). While numerically this supports Hypothesis 6, that removal of the base would lead to a greater number of attacks, there is no evidence the base actually had any impact on the events. No one claimed responsibility for these attacks, and the Austrian authorities assessed all three attacks to be ethnically motivated (BBC report in GTD 2009).

Honduras

Honduras suffered a number of attacks annually from the 1970s until 1997, but during the study period there was only one attack. A U.S. base was present from 2000-2002 with no incidents before or during this period.[29] The single attack in the study period, in 2004, was an attack on a public bus conducted by a group opposed to the death penalty (GTD 2009). There is no indication that this attack in northern Honduras was in any way related to the closed U.S. Army installation in that country.

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[29] The base had been used by U.S. forces for a number of years before it became recognized as a U.S. facility.

Uzbekistan

In 2001 the U.S. began military operations in support of the war in Iraq from an airbase in Uzbekistan. This base operated until the Uzbek government asked the U.S. to leave in 2005 (Synovitz 2005). The first three years the base was in operation were quiet, but in 2004 there were five suicide bomber attacks in the country, including attacks against the U.S. embassy, the Israeli embassy and the Prosecutor General's Office in Tashkent (GTD 2009). Three different groups claimed responsibility for these three attacks, all conducted on the same day, which makes determining the true actor difficult. Authorities think the group most likely responsible is the Islamic Jihad Union Uzbekistan (GTD 2009).

The Islamic Jihad Union is believed to have al-Qaeda ties and to be opposed to the Uzbek government and U.S. policies in Iraq and Afghanistan (U.S. Department of State 2008). The al-Qaeda ties could indicate the base may have had some influence on the attack decision, but the base was not mentioned in the credit taking. Nevertheless, the premier researcher on suicide attacks, Pape (2005), is adamant that suicide bombers are primarily driven by the desire to free their country from occupying forces. Thus, because these were suicide bomb attacks, the idea that the attackers could have been looking to have the base removed cannot be eliminated. However, airlift operations at a single base with minimal ground forces hardly fit the typical image of an occupation force.

Country Specific Circumstances—First Base Installed

This section will examine the five countries which allowed the first U.S. facility into the country. Hypothesis 5 indicates that after the base was allowed, attacks should have gone down. However the limited number of attacks in each country prior to the establishment of the base makes finding support for the hypothesis difficult.

Bulgaria

Bulgaria endured a few terrorist attacks in the early years of the study. No one claimed credit for any of them. In the last year of the study, the year a U.S. basing agreement was announced, there was one attack. Again, no one claimed responsibility for the attack in which a bomb was detonated in a law office in an apartment building during a police chief's meeting (GTD 2009). All of the attacks, both those before the agreement for a U.S. base and the one during its presence, were similar, a bomb outside a hotel, house or office. There is no evidence that the base had any influence on the attack in large part because no one claimed credit for any of the attacks.

Ecuador

Of all the countries, Ecuador is where the strongest argument can be made for a link between attacks in a country and a U.S. base. The country had a small number of attacks, primarily against banking interests, in the years prior to the U.S. base agreement in 2002/3. In 2002, there was an attack against a McDonalds. The People's Revolutionary Militias (PRM), the group which claimed responsibility, criticized U.S. policies in the credit-taking. In 2003, the first year the base appeared in the BSR, the PRM conducted three attacks around the country which they said were in protest of U.S.

foreign policy (GTD 2009). The group only operated in 2002 and 2003 and has not been

heard from since.

Even though the base was not specifically mentioned, it is credible to think that

it might have been a marginally precipitant cause for the attack. The emergence of the

group was coincident with the establishment of the base, and the group claimed that

the attacks were a condemnation of U.S. policies. While the timing could indicate the

base was a precipitant cause for the attacks, lack of mention of the base during credit

taking weakens the argument. Additionally, the base remains and the attacks have

ceased, which could indicate that the group rethought its methods, was effectively

countered, or possibly decided the base was no longer an important issue. There is a

difference between terrorist acts precipitated by U.S. foreign policy in general and those

precipitated by the presence of a U.S. installation. Therefore, while a link could exist, a

definitive conclusion cannot be drawn.

Kenya

There were one or two attacks a year in Kenya, primarily against police or private

citizens, prior to the arrival of the U.S. base in 2002. This level of activity continued for

several years after the base agreement. The attacks during the early years of the base

presence were assessed to be al-Qaida attacks against Israeli interests and not related

to the U.S. facility (GTD 2009). In 2007 and 2008, five and six years after the base

arrival, there were 13 attacks each year, up from the approximately two a year

previously (GTD 2009; WITS 2010).

Most of these were conducted by a guerrilla organization operating in the western part of the country, the Sabaot Land Defense Force. Key issues for the group are allocation of scarce land resources and unemployment (GTD 2009). It is unlikely that the base had any influence on the group which seemed more focused on ethnic issues. When credit was claimed for incidents, there was never any reference to the U.S. base or U.S. policies. Given the amount of time between the opening of the base and the increase in attacks, the fact that the base was never mentioned by the group when credit-taking and the goals of the group responsible for the attacks, the U.S. base does not seem to be a precipitant cause of the attacks.

Kyrgyzstan

In the two years prior to the U.S. base, the terrorist attacks which occured in Kyrgyzstan were primarily from Muslim rebels operating near the Uzbekistan boarder (GTD 2009). After the arrival of the U.S. base in 2002, the type of attacks did not change but the annual average did diminish. This is in support of the Hypothesis 5 that the presence of the U.S. base should reduce the number of terrorist attacks in a country. The reduction in attacks was small, from about three a year to about one a year, and there is no evidence that it is directly attributable to the U.S. base. The first decade of the 21st Century was a turbulent period in the country's history and any number of factors could be used to explain the reduced number of terrorist attacks. However, the fact that there was a reduction in attacks provides a counter to those who claim the U.S. base should increase terrorism. None of the credit taking for the attacks made any reference to the U.S. airbase or U.S. policy (GTD 2009). The ethnic violence which arose

in 2010, in the same region of the country where most of the terror attacks during the study occurred, seems to reinforce the assessment that Kyrgyzstan's terrorist attacks during the study period were primarily ethnically motivated, and had little if anything to do with the U.S. base (Q&A 2010).

United Arab Emirates

There were no attacks at all reported in this country before the U.S. base was allowed or during the nine years of the study it was present.

Summary

The 16 instances of first base in-last base out in the 13 countries examined provided no conclusive evidence that the first U.S. base being put in a country or the last U.S. base being removed from a county has any effect on terrorist attacks in that country. There are two cases, Uzbekistan and Ecuador, where an argument can be made that the base is a precipitant cause of the attacks, but no generalization can be taken from these data.

This qualitative analysis, just like the quantitative analysis which precedes it indicates that while Hypotheses 5 and 6 are supported on the surface, a more detailed examination reveals that the relationship between basing and terrorist attacks may actually be ill-defined. The analysis indicates that there is initial support for Hypothesis 6 that installing a U.S. base in a country where there is not one reduces the incidence or number of terrorist attacks. In two cases the number of attacks rose with the installation of the U.S. facility; it fell in four cases and in three others there was no

change. Numerically this supports the hypothesis, but the circumstances around the attacks do not provide any evidence that the bases were part of the terrorists' consideration, with Ecuador and Uzbekistan as a possible, but not confirmed, exceptions.

Removing the last U.S. facility also does not appear to have an effect on the incident or number of attacks. In four instances the number of attacks went up after the removal of the base, and in five cases it went down. The limited number of attacks before, during or after the base in all most all countries makes any generalization of the results difficult. Additionally, the claim takers only mention the U.S., or U.S. policy, in a couple of incidents. Not once was the U.S. base or U.S. presence specifically mentioned.

Table 5.1
Number of Attacks Before, During, and After U.S. Base

Country	Before U.S. Base		During U.S. Presence		After U.S. Left	
	Atks/Yr	Avg/Yr	Atks/Yr	Avg/Yr	Atks/Yr	Avg/Yr
France			54/7	6.4	14/3	4.66
Hungary			0/6	0	1/4	.25
New Zealand			4/5	.8	0/5	0
Panama			1/1	1	0/9	0
Saudi Arabia*			12/4.5	2.66	26/5.5	4.7
Venezuela			21/5	4.2	7/5	1.4
Austria	0/1	0	0/3	0	3/6	.50
Honduras	0/1	0	0/3	0	1/6	.16
Uzbekistan	8/3	2.66	7/4	1.75	0/3	0
Bulgaria	3/8	.37	1/1	1		
Ecuador	11/4	2.75	7/6	1.16		
Kenya	3/3	1	33/7	4.71		
Kyrgyzstan	7/2	3.5	8/8	1		
Qatar#	2/4	.5	1/6	.16		
UAE	0/1	0	0/9	0		

* In 2003 Saudi Arabia suffered eight attacks. Four were before the base was removed, but after the withdrawal announcement, and four were after effective base closure.

While the number of bases did not change, the function and size of the only base in the country grew in 2003 to such an extent that Qatar warrants inclusion in this chart.

Table 5.2
Attacks by Country/Year

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Base Removed										
France	12	13	8	8	9	3	1	7	5	2
Hungary	0	0	0	0	0	0	0	0	0	1
New Zealand	0	0	1	0	3	0	0	0	0	0
Panama	1	0	0	0	0	0	0	0	0	0
Venezuela	4	0	5	4	8	0	0	0	2	5
Base installed and then removed										
Austria	0	0	0	0	0	0	0	1	1	1
Honduras	0	0	0	0	0	1	0	0	0	0
Uzbekistan	8	0	0	0	0	5	2	0	0	0
Base installed										
Bulgaria	0	2	1	0	0	0	0	0	0	1
Ecuador	2	3	4	2	3	2	0	0	0	2
Kenya	0	2	1	2	2	0	2	2	13	13
Kyrgyzstan	3	4	1	1	1	0	1	3	1	0
UAE	0	0	0	0	0	0	0	0	0	0

Chapter 6
Qualitative Findings: Case study – Saudi Arabia and Qatar

In its final analytical section, the study uses process tracing to conduct a more

comprehensive examination of two countries, Saudi Arabia and Qatar. Process tracing is

a method of within-case analysis to examine the events, social actions, and decision

processes to specify mechanisms linked to the outcome which may go unobserved in

statistical analysis (Falleti 2006). This second part of the qualitative investigation is a

Most Similar Design (MSD) case study. A MSD is appropriate because these two

countries share many economic, cultural and political characteristics. In a MSD these

factors can be held constant ("considered irrelevant" [Lim 2006, 34]). These two

countries provide special insight into the base/terrorism relationship because in 2003,

the mid-point of this study, Saudi Arabia and Qatar virtually swapped a U.S. base when

the primary functions of Prince Sultan Air base in Saudi Arabia were moved to Al Udied

Air Base, in Qatar[30] (Bosker 2003).

This component of the qualitative analysis begins with a brief discussion of these

countries' similarities, focusing on the permissive factors noted in the literature. These

data come from the same sources as were used in the other sections of the study. The

study conducts a detailed examination of the attacks that took place in each country

before and after the basing change. It looks particularly at whether the United States,

or U.S. military or military bases, is mentioned as a precipitant factor for the attack(s).

For any attacks when the base is mentioned as a precipitant cause, the State

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[30] While Qatar officially had the base and an associated equipment storage facility over the entire time
frame of the study, the facility's function and size grew so dramatically in 2003 that Qatar can be
considered to have gone from zero bases to one base.

Department reports on the history and actions of terrorist groups, the National Counterterrorism Center's Worldwide Incidents Tracking System (WITS) and the GTD's historical analysis of terrorist groups are consulted to evaluate if the claim is consistent with the group's motivation, capabilities and objectives.

Content analysis of media and government reports and other sources with information about events and circumstances surrounding the Saudi and Qatari basing decisions is conducted to identify factors which appear to have informed those decisions. The study uses the information from the content analysis to generate an analytic narrative (Falleti 2006) about the specific factors informing each country's basing decision. Most of the information for this analysis comes from secondary sources. This is because there are few accessible archives of Saudi or Qatari English language media coverage of events during the study period. Also, this study's author does not read Arabic.

The analytical narrative is explored looking for evidence of changes in policies or attitudes which could account for a change in attacks or numbers of attacks. This analysis includes evaluation of any evidence that the U.S. had influence in the policy change. By examining all of these factors, the study should improve our understanding of how the approximately 265 mile cross-border movement of a U.S. base might be associated with terrorist attacks in these two countries.

By all accounts, while the two countries have many differences, they are similar in a significant number of ways. They are in the same region of the world. Both have a predominance of Muslims in the population and both adhere to the Wahhabi version of

Sunni Islam. However, the religious tenets are not as strictly enforced in public settings

in Qatar as they are in Saudi Arabia (Blanchard 2008). They are both hereditary

monarchies, they have similar levels of economic inequality, as measured by Gini scores

(World Bank 2009). Both countries have undertaken some efforts at political

liberalization, although Qatar has moved farther and faster than Saudi Arabia. Both

countries have also maintained somewhat close relations with the U.S. as a hedge

against foreign threats. Both also agreed to host a U.S. base, although under different

conditions.

An in-depth look at these countries becomes informative in the quest to

determine the relationship between U.S. basing and terrorism because bases in the

Middle East, and Saudi Arabia in particular, were cited by many as the foundational

cause of the rise in terrorism worldwide (Johnson 2004; Pape 2005; Scheuer 2006; and

others). Additionally, some scholars claim the removal from Saudi Arabia of the base

and most of the troops, (200-400 remained behind in an advisory capacity), was a direct

result of a terrorist attack, the September 11, 2001 bombing of the World Trade Center

and the Pentagon [admittedly these were attacks on the U.S. and not on the host

country] (Johnson 2004). If these authors are correct and a base is a precipitant cause

of the attacks, then countries which are similar should see a difference in number of

attacks centered on the presence of a U.S. base. Additionally, if U.S. bases and terrorist

acts are related, the terrorists' claim for credit should include some mention of the

basing decision.

Background

In 1991, with Iraq troops already having overrun Kuwait and massed on its border, Saudi Arabia invited the U.S. led coalition to establish or occupy a number of military bases in the Kingdom. After a very short war, counter to expectations that U.S. forces would leave when the fighting was over, U.S. troops remained in Saudi Arabia to enforce U.N. sanctions against Iraq. This arrangement lasted until, in 2003, just prior to the Iraq war, the U.S. and Saudi government made a joint decision to remove the last U.S. base from Saudi Arabia (Garamone 2003). This decision was driven by a number of concerns held by both sides. This unease did not arise overnight; it developed and matured over several years. The U.S. was concerned about Saudis limits on military operations supporting the Southern no-fly zone over Iraq (Graham and Ricks 2002; Gordon and Schmitt 2003). From the U.S. perspective, these restrictions, while not onerous, did not bode well for use of the base for an invasion of Iraq, and just such an invasion was in the planning stages. The U.S. was also concerned that the continuing presence of American military troops in the Kingdom was detrimental to the stability of the rule of the Saudi royal family (Gause 2003a).

The Saudis shared the concern that the presence of U.S. troops had become a threat to the House of Saud. The Saudis reportedly believed the U.S. had "overstayed its welcome" (Ottaway and Kaiser 2002, 1), that U.S. and Saudi security interests in the region had diverged, and that a continued U.S. presence created the impression of a Saudi dependence on the U.S. for security (Ahrari 2002). Crown Prince Abdullah

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reportedly argued that growing anti-American sentiment within Saudi society was a possible precursor to violence against the crown; the presence of U.S. troops was creating a threat to the country (Ottaway and Kaiser 2002). By 2003, the countries had decided it was in their mutual interest to remove the bulk of U.S. troops from the Kingdom (Rumsfeld 2003).

That same year the Qatari government, in conjunction with the U.S., finished a $1B multi-year modernization and expansion of a Qatari air force base designated for U.S. use. They invited the U.S. to move its regional command and control center from Saudi Arabia to Qatar (Blanchard 2009b). This was done despite the likely possibility of a U.S.-Iraq war (Terrill 2006), although during the period directly prior to the move the Qatar foreign minister, Sheik Hamad bin Jassim bin Jabr al-Thani, said that Qatar was "working hard to avoid Iraq being attacked" (in C. Smith 2002, 14).

Why was Qatar willing to accept a large number of U.S. troops knowing their presence was thought to bring terror attacks to the current host, Saudi Arabia, and knowing they destined for conflict in Iraq? The Qatar government did not seem to worry about the base bringing an increased number of terrorist attacks, even though the base was the site of a terrorist attack in 2001 (GTD 2009). Perhaps, with no specific threats to the country, and with a desire to become a greater political power in the region, Qatar was taking advantage of the developing concerns in the U.S.-Saudi relationship by offering to host the U.S. forces (Da Lage 2005).

The agreement to host the U.S. command and control center was a part of Qatar efforts to strengthen its relationship with the U.S. and "portray itself as a better ally the

Riyadh" (Rosman-Stollman 2009, 205). The Qatar-Saudi relationship has been rocky at

best and the idea that Qatar could gain from a Saudi loss may have also been part of the

Qatari decision process (Blanchfield 2002). Gause (2010) writes that the Persian Gulf

has historically been a tri-polar regional security system with Iran, Iraq and Saudi Arabia

as the poles. Additionally, there is a subsystem with the smaller states oscillating

between Iraq and Iran on one side and Saudi Arabia on the other. The U.S invasion of

Iraq removed the country from its power position in the region, and provided the

smaller states with a new foil in their relations with the Saudis, the United States (Gause

2010). When the U.S. transferred its major command and control center in the Gulf

region to Qatar, it signaled a larger role for the smaller states in U.S. plans (Gause 2010).

The idea that Qatar might expand its relationship with the U.S. at the expense of the

Kingdom may have been a Saudi concern as well. Miles (2005) indicates that at the

same time the Saudis wanted the U.S. out of their country they were concerned that the

U.S. would develop a special military relationship with Qatar which might affect the

regional balance of power

From the U.S. perspective, Qatar was a country with minimal sectarian, ethnic or

political division (Hawthorne 2003) and which historically suffered few terrorist attacks.

It was seen as a safe location for military operations. Additionally, Qatari pro-western

attitudes, specifically allowing women to have greater freedom of movement[31], and

Qatari willingness to allow the U.S. great(er) latitude in conducting military operations,

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[31] Saudi restrictions on women had created a problem when an Air Force Lt Col, Martha McSally, sued
Secretary of Defense Rumsfeld over restriction on women's dress and activities while deployed to Saudi
Arabia (Female 2001).

appealed to the U.S. decision makers (Blanchfield 2002). At this point, the study will

examine each country in depth.

Saudi Arabia

Saudi Arabia suffered a small number of attacks in the study period before

removal of the base. These attacks primarily were directed at British and American

citizens working in the Kingdom and were located at foreign housing compounds and

businesses frequented by foreigners. No group claimed responsibility for the majority

of the attacks. Some of the attacks were very small scale and "Saudi officials believed

that some may have been personally rather than politically motivated" (GTD 2009,

11/23/2000 attack).[32] One exception was the hijacking of an airline in 2000. This act

was conducted by a group which said it wanted the Saudi royal family to leave power

(GTD 2009). Table 6.1 shows, as the hypothesis proposes, Saudi Arabia experienced an

increase in terrorist attacks after the U.S. base was removed. In truth, the number of

attacks increased shortly after the announcement, but before implementation, of the

U.S. withdrawal.

In May, 2003, just weeks after the formal announcement that the U.S. facility at

Prince Sultan Airbase would be closing, a series of nearly simultaneous attacks were

conducted at housing complexes for foreign workers and at the Saudi Maintenance

Company headquarters in Riyadh (US more 2003). A similar series of attacks occurred in

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[32] These claims may have been designed to provide a convenient excuse for the Saudi government not to take action rather than being representative of a valid belief.

November, 2003 (GTD 2009). Saudi officials suspected the attacks were the work of Al-

Qaeda members, but no one claimed responsibility for the blasts (GTD 2009).

In 2004, the year of the largest number of attacks in the country in the study

period and a time shortly after the U.S. base had been removed, westerners were again

the targets of numerous attacks. The group Al-Qaeda in the Arabian Peninsula claimed

responsibility for a series of attacks from May through December of that year, including

an attack on the U.S. consulate in Jeddah in December. 2004 was the last year there

was a significant number of attacks in the Kingdom.

In 2005, coincident with a drastic change in Saudi counter terrorism efforts,

there were no attacks. Thereafter, the annual number of attacks was small, even as the

targets, Saudi security forces and western workers, and the perpetrators, Al-Qaeda in

the Arabian Peninsula, did not change. In 2006, the U.S. consulate in Jeddah was

attacked again. And again, Al-Qaeda in the Arabian Peninsula was suspected of

conducting the attack; however, no group took credit for this attack (GTD 2009).

While on the surface the numbers support the Hypothesis 6, that removal of the

base leads to more attacks; association does not demonstrate a causal link. There may

be more here than the numbers explain, much as was found in the quantitative section

and the first part of the qualitative section. The relatively rapid return to historic lower

levels of attacks raise questions about identifying absence of the base as a precipitant

cause of the attacks. Hypothesis 6 notwithstanding, something other than the U.S. base

status change might provide a better explanation for the two-year increase in attacks,

despite the proximity of the attacks to the base change event.

Determining what other factors may contribute to the increase in attacks after the removal of the U.S. base necessitates review of the Saudi-U.S. relationship, Saudi domestic issues during the timeframe, and the Saudi view of the terrorist threat. As Richardson (2006) explains, the relationship between permissive and proximate factors and terrorists' acts is complex and must be understood in context. Interviews with government officials and close examination of official records would have greatly facilitated this task, however that was not feasible. The next best solution is using news reports, policy recommendations, and secondary sources to determine how the base and the terrorist attacks may be related.

The Saudi-U.S. relationship, based in military, political, and economic/commercial understandings developed in the 1930s and 1940s, has been a relatively stable one (Blanchard 2009). However it underwent a major change in 1991 when Saddam Hussein's Iraq invaded Kuwait and threatened the Saudi Kingdom. During, and for ten year after, the Gulf War, the Saudis hosted U.S. combat troops. These forces were first involved in evicting the Iraqis from Kuwait, and then in enforcing the U.N. no-fly zone over southern Iraq. As a member of a U.S. Air Force unit which ultimately was to be one of the first in Saudi Arabia, the author can say the decision to allow U.S. troops and aircraft to operate from Saudi soil in 1991, even with Iraqi forces gathered on the border, was not an easy one for the Saudi government. Permission for our unit was given, and then revoked, several times prior to our deployment. Perhaps this Saudi equivocation was an indication of an unstated fear that the presence of U.S. personnel would create a quandary. Conceivably, it was only after the fear of the Iraqis

outweighed this concern that permission was granted for the U.S. deploy into the country.

The literature suggests that this type security consideration might be a routine occurrence for countries offering to host a U.S. base. Yeo (2005) found that security dependence was a significant factor in basing decisions, although he was looking at the removal, not the installation, of bases. Diehl (2009) noted that security concerns can be deal breaker in initial (first base allowed) basing decisions like this one. On the other hand, Cooley's (2008) two-level game theory of basing posits that security concerns can take a back seat to other issues, and there were certainly enough other issues for the Saudi government to consider. Saudi senior clerics were resistant to the idea of hosting U.S. military forces and Osama bin Laden had warned King Fahd that western forces should not operate from Saudi Arabia (Bodanski 2001).

So why would the Saudi government take the risk of bringing U.S. troops to the land of the Holy Shrines? Perhaps history indicated it was not that significant an event. It would not be the first time there was an American base on Saudi soil. From the mid 1940s through the early 1960s, U.S. had an air base at Dhahran in Saudi Arabia (Pollack 2002). There were minimal difficulties with this prior arrangement and that experience might have created "an ambivalence concerning the in-country American military presence" (Pollack 2002, 79).

Other countries of the region might not have been seen an American presence in Saudi Arabia as that large a problem either. Several Gulf countries had hosted U.S. facilities in the past including Saudi Arabia, Bahrain and Oman but the preference for

most was to keep the U.S. close enough to provide some defense but far enough away

to create some "political space" (Gause 2010, 127). The events of 1990 changed this

attitude; suddenly America was much more welcome across the region (Gause 2010).

Kostiner (1998) writes that in the 1990s the Gulf Cooperation Council states' inability to

defend themselves, and unwillingness to rely on Egypt and Syria to provide regional

defense, created a set of circumstances in the early 1990s made an enhanced U.S.

military presence in the region a preferred choice for many. This theme is echoed by

Colonel Bernard Dunn (2002), U.S. Defense Attaché to Saudi Arabia in 2000-2002, who

says that in 1991 the Gulf states were "…open to the presence of American forces and

allowing us to operate from their (Saudi) bases" (5). This historical perspective reveals

that there are several possible explanations for why the Saudis would not find it totally

out of the question to permit U.S. troops to fight from its soil.

Not surprisingly, the situation did not develop as smoothly as the Saudi

government may have hoped. The 1991 Gulf War presented a number of challenges

for, and to, the Saudi monarchy. The continuous presence of thousands of American

servicemen in the country served to exacerbate some of these problems. For example,

religious leadership in the country who opposed the American presence used it as

evidence that the House of Saud was not acting in the best interests of Islam (Unger

2004). Questions about how the royal family can claim to be the legitimate defender of

the Holy Places if it cannot defend the country without assistance began to arise

(McMillian 2001). The appearance that the government of Saudi Arabia lacked the

ability to protect Islamic holy sites, or its citizens, without western troops created a

sense of vulnerability for the royal family. Reformers in the Kingdom leveraged this

weakness to generate domestic pressure for political change (Al-Dakhil 2003).

In 1990, in part as a response to the Saudi government's open invitation to the

U.S. to establish bases in the country, the Awakening movement emerged in Saudi

Arabia (Byman 2005). The organization's members were openly critical of the Saudi

regime. The movement's criticism of the Saudi regime was picked up by intellectuals

and university students, who, in 1991, wrote the Letter of Demands which called on King

Fahd to undertake a number of political and social reforms. The next year, 1992, a

group of clerics sent the king the Memorandum of Advice calling for stricter observance

of Islamic law and an end to relations with the West (Zuhur 2005). The Saudi

government's response was not to liberalize extensively, but rather to initiate limited

reforms and to go on the offensive (Blanchard 2009b). The government detained some

who were critical of the government and co-opted others, trying to limit the threat to

the stability of the royal family.[33]

Throughout the 1990s, the House of Saud found itself trying to maintain a

delicate balance between what Unger (2004) calls its two different realities: its reliance

on the U.S. for security and its need to deemphasize this relationship to facilitate regime

survival. The Kingdom's willingness to allow the U.S. remain in the country to enforce

the Southern no-fly zone, while simultaneously limiting what operations could be

conducted from Saudi bases and resisting U.S. calls to crack down on Islamic militants

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[33] As one example of co-option, Byman (2005) says that the government may have paid Al-Qaeda not to conduct attacks in the Kingdom, rather than detaining its leader. This decision could have resulted from a royal family determination that confrontation would have increased the threat to the monarchy, while payment would not (Byman 2005).

when the militant action was not being directed against the Saudi government,

demonstrates this balancing act (Marquardt 2003). The longer the U.S. remained in the

country the more difficult it seemed to be for the Saudis to maintain the balance. It was

as if neither the U.S. nor the Saudis understood the effect of the continuing U.S.

presence in the most sacred of Islamic lands (Cordesman 2005). As the decade

progressed, bombing attacks against U.S. military personnel and facilities in 1995 and

1996 provided confirmation of a growing anti-Americanism, and anti-government,

sentiment in the Saudi population (Prados 2003). Ultimately, these attacks convinced

the Saudi government some stronger action must be taken. The Saudis began to

capture, imprison, and execute members of the groups which were involved in

demonstrations and violence.

The attack on the U.S. facility at Khobar Towers in 1996 resulted in a significant

crackdown on dissidents (Zuhur 2005). Cooley (2005) says that this attack was a wake-

up call for the Saudi government that an internal threat existed. This was when they

were forced to come to grip with the reality that the U.S. presence might have been a

"domestic political threat" (80). This was also the beginning of a crackdown on

dissidents and terrorists by the Saudi government which, while its trajectory may have

been inconsistent, continues to the present (Crystal 2005).

In addition to the stepped-up anti-terrorism efforts, the most immediate

response to the Khobar Towers attack was to consolidate Western forces at "fewer and

less accessible sites (Pollack 2002, 9). This was one of the few policies on which both

countries strongly agreed. It enabled the Saudis to limit the visibility of the U.S. force,

and it enabled the U.S. to protect its personnel. Admittedly, not everyone in the U.S. government thought this response was a plus. Senator Carl Levin, Senate Armed Service committee chair, reportedly said "There's a real problem where we're told by a country that's presumably an ally of ours doesn't want us to be seen by its people" (in Borger 2002, 1).

The "presumably an ally" part of Senator Levin's comment may have contained more than a kernel of truth. The aftermath of the Khobar Towers attack exposed substantial evidence of a strained relationship between the two countries. Zuhur (2005) declares that post-incident diplomacy made clear that the Saudis and the U.S. had differing views of, and interest in, other countries in the region specifically, Syria and Iran. The relationship was further strained by the incident investigation. While the Saudis and the U.S. conducted a joint investigation into the Khobar tower bombings, U.S. investigators were critical of their Saudi counterparts (Prados 2003). Porter (1999) says that intelligence reports reveal that individuals high in the Saudi government instructed local officials to "go through the motions of cooperating with U.S. officials on their investigation but to obstruct it at every turn" (1). Saudis were not particularly happy with the U.S. either. The U.S. was insistent that the Saudis share intelligence information about the suspects and their cohorts but was unwilling to reciprocate by providing its intelligence information (National Commission 2004).

While there may have been greater interstate tension during this period, within the country the years after the 1996 bombing were a period of general calm from terrorist attacks. Whether the peace resulted from the Saudi crackdown, or its

willingness to explore (but not necessarily undertake) more social and political

openness, potentially buying off the terrorist, or the less visible U.S. presence after the

attack is difficult to determine. The period of quiet was relatively short lived. By the

turn of the century, violence re-emerged.

Small numbers of attacks occurred in 2000, 2001 and 2002. Most of the attacks

were against westerners, so potentially they were not of as great concern to the Saudis.

But perpetrators of others, like an airline hijacking in 2000, claimed they wanted the

Saudi royal family to step down (GTD 2009), and that got the government's attention.

The Saudi response was typical: another crackdown on terrorist groups; but this time,

under international pressure, they also undertook some broader measure designed to

affect terrorism outside Saudi borders. They began efforts to control terrorist funding

and engaged in greater cooperation with international anti-terrorist organizations

(Ashraf 2007).

The attacks in these years, although limited in number, could have instilled fear

in the royal family that the internal situation might get worse if U.S. troops remained.

Because of the perceived growing lack of confidence in the House of Saud as the

protector of Islam's holy shrines and in the face of domestic criticism and increasing

terrorist attacks (particularly those against U.S. facilities in country), by the turn of the

21st century the Saudi government recognized that continuing to accommodate the U.S.

was to endanger itself (Abir 2002). On the domestic front, the removal of the U.S.

would alleviate domestic focus of anti-American feelings (Gause 2003b, Hardy 2003).

On the international front, it would remove one of the issues Osama bin-Laden used to

rally his followers. But this realization arrived with no actual increase in attacks. It was

a political reality which was not based in tangible acts but rather based in fear of an

increased vulnerability.

With many friction points already straining the U.S.-Saudi relationship, it is easy

to understand how the September 11, 2001 attacks on New York and the Pentagon may

be seen the straw the broke the back of the Saudi-U.S. relationship camel (Van Natta

2003). Ahrari (2002) provides four reasons why U.S.-Saudi relations were destined to

deteriorate after September 11, 2001: First, the high number of Saudi hijackers, 15 of

19; second, bin Laden's harping about the U.S. presence on sacred soil; third, the claim

from the Islamic world that the U.S. was at war against Islam coupled with U.S. citizens'

actions against Muslim and Arab groups, and finally, the persistent din from the

American media that the Saudi government was not cooperating in the war on terror.

Crystal (2005) adds calls for increased political liberalization to this list. The

determination that a close relationship with the U.S. was a security liability, not asset,

marked a major departure from the past. The Saudis had relied on U.S. protection from

their neighbors for the better part of six decades (Gause 2003a).

Gause and Crystal (2002) write that change in Saudi Arabia comes from two

different processes: an incremental change process and discontinuous change process.

The decision to remove the base was a function of both. The September 11 attacks

provided the catalyst for sharp and sudden discontinuous change, relatively speaking,

against the background of a slower more incremental political change which is a natural

part of any multinational relationship (Van Natta 2003). After the 2001 attacks, the U.S.

was making more and more demands on the Saudis, while at the same time the Saudis

felt that their improved relations with Iran coupled with the threat from Iraq having

been neutralized- resulted in a less threatening regional environment, therefore they

had less need of U.S. protection (Terrill 2006).

Ahrari (2002) suggests that the Saudi government knew even prior to the

September 11 attacks that their relationship with the U.S. must change. The situation

with the base had created the impression the Saudis were "supplicant" (Ahrari 2002, 3)

to the U.S. and its interests. The Saudis were optimistic that asking the Americans to

leave would "cleanse" (Ahrari 2002, 3) that impression.[34] The idea that forces for

change in the U.S.-Saudi had been gathering for some time can be found in other

sources as well. Woodard (2006) writes that, in August 2001, tension over the Israel-

Palestinian issue brought the Saudi Ambassador to the White House with a message

that it appeared time for each country to make security decisions independent of the

other. This was not idle diplomatic chatter. The Israel-Palestinian conflict was a

genuinely serious issue for the Saudis. It was so important that Tyler (2003)

hypothesized that even the removal of U.S. troops from Saudi Arabia would not reduce

the anger generated by the Israeli-Palestinian conflict. Change was in the air, and the

Saudis were not the only ones who were aware of the need for it.

In early 2002, the Washington Post ran several front page stories "predicting"

that U.S. troop would be out of Saudi in the near term. Ottaway and Kaiser (2002)

reported Saudi officials saying that the U.S. had "overstayed its welcome" (1) and that

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[34] This was written more than a year before the U.S. was asked to leave Saudi Arabia.

U.S. troops should leave as soon as operations in Afghanistan were wrapped up. In the same story, they quote Sen. Carl Levin (D-Mich), chairman of the Armed Services Committee, saying that U.S. forces should leave and "find a place that is more hospitable" (1). In 2002, Gause and Crystal, writing in a U.S. National Defense University publication, said that they expected the Saudi government to request the U.S. to remove its forces from their country, but not necessarily from the region, immediately after the need for Southern Watch ends. In April, Graham and Ricks (2002) reported that detailed plans had already been made to move the U.S. military command post from Saudi Arabia to Qatar: the asserted reason, concern that the Saudi facility might be unavailable for "combat or political" (1) reasons.

So, even as early as 2002, the stage was being set for a withdrawal of American troops from Saudi Arabia. In April 2003, U.S. Defense Secretary Rumsfeld and Saudi Minister of Defense and Aviation Prince Sultan Bin Abdul Aziz Al Saud announced that an agreement had been reached for the majority of U.S. forces to leave Saudi Arabia within the year (Rumsfeld 2003). Except for the potentially significant relationship to the bombing against the U.S facilities five years prior, neither side seem to give great consideration to actual terrorist attacks when making the base closure assessment. On the Saudi side, the decision to distance itself from the U.S. was driven by a number of domestic and international factors including, but not limited to, the perception of an increased terrorist threat from the U.S. presence.

Deterrence theory suggests that when deciding whether to use force or deterrence against terrorist, states balance cost of deterrent concession against the

benefits of force (Trager and Zagorcheva 2006). In this round the Saudis had picked

concession, not force. But deterrence theory also says that this force-concession choice

is usually not a onetime decision. Ultimately, the possibility of "deterring future

terrorists… provides a strong additional incentive" (Trager and Zagorcheva 2006, 67) to

resort to brute force if deterrence fails. Unfortunately for the Saudis, deterrence did

fail. Counter to the expectation that removing the U.S. troops would reduce unrest in

the Kingdom, approximately two week after the announcement, terrorists struck.

In Riyadh, an explosion at compounds housing foreign workers on May 12 killed

26 (Darling 2003). Then six months later, with the U.S. forces already gone, terrorists

struck again, killing 18 and injuring 122 at another western housing compound (Darling

2003). When these events proved their effort to deter new attacks had failed, the

Saudis response, a significant anti-terror campaign, should have been predictable. But

the question remains, why would the attacks come on the heels of the announcement

that U.S. forces were pulling out if those forces were the precipitant cause?

One answer could be the time it takes to plan such an attack. Such a series of

inter-related attacks probably would have a significant planning timeline. Historically,

the average time for Al-Qaeda to plan a major attack is estimated at 1-3 years (Venzke

2003). So, even if base withdrawal was the goal, if the plan had been developing for

years, the terrorists may have been unwilling or unable to change course based on the

withdrawal announcement made two weeks prior. On the other hand, the specific

targets, a housing compound, and ongoing domestic dissatisfaction reduce the

likelihood that the base was the direct catalyst for the attacks. These factors reinforce

the idea that a general anti-western feeling, or Saudi government actions, or the terrorist's beliefs about Saudi government's anti-terrorism capability might provide a better explanation for the increase in number of attacks (Miller 2003).

Terrill (2006) argues that one reason the Saudi government wanted U.S. troops out of their country was because they thought it would deprive those agitating against the House of Saud of a major propaganda tool. Perhaps the terrorists also recognized they would lose this valuable excuse for attacks aimed not at the U.S., but rather designed to achieve the ultimate goal of bringing down the Saudi ruling family (Hardy 2003; Miller 2003). The timing of the attacks could also have been an effort to capitalize on the announced pullout. They could have hoped to make it seem as if the U.S. had been forced out of the country, thereby giving the perpetrators more cachet in the completion among terrorist groups for recruits (Gold 2003). Another option is that the withdrawal of U.S. troops, while designed to placate the militants, may in fact have emboldened them. It may have served to reinforced the idea that Americans were "wrongfully engaged on Muslim soil" (Zuhur 2005, 4) at the request of the House of Saud; buttressing the idea that the royal family was not a proper protector of the Holy Shrines and should be removed.

For years, the Saudis had focused on the external threat, and now they were being forced to admit to and deal with an internal threat (Zuhur 2005). And deal with it they did. The Saudi government dramatically increased its anti-terrorism efforts. Once the Saudi government demonstrated commitment and competency against the terrorist, the activity level dropped dramatically. Again, the literature suggests that this

may be expected. The most salient factor for terrorist attacks is a government's

willingness and ability to counter them (Crenshaw 1981). As governments demonstrate

greater counter- and anti-terrorism capability, they raise the cost for the perpetrators

which should ultimately reduce the opportunities for attacks (Enders and Sandler 1999).

However, it is also possible that the attack was only marginally related to the

U.S. troops or the announced withdrawal. The day for the attack may have been less

associated to the announcement of the U.S. withdrawal of personnel and more

correlated to logistics. In the months before the first attack, both the U.S. and Britain

had been warning the Saudi about a heightened terrorist threat (Cronin 2003). This

warning was taken seriously by the Saudis. They conducted a number of raids against

suspected terrorist sites throughout the spring. In May, these raids resulted in the

arrests of several individuals, and the discovery of a major arms cache in the capital city

(Jehl 2003).

After this weapons find, the Saudi interior minister announced that a search was

on going for 19 members of an Al-Qaeda terrorist cell suspected of planning terrorist

attacks in the country (Sipress and Finn 2003). The newly inspired Saudi interest in

finding these terrorists could be interpreted as a tacit admission by the Saudis that the

in-country terrorist threat may not be limited to western interests, and that the

government faced a real terrorist threat (Gause 2003b; Gerges 2005). In fact, Sipress

and Finn (2003) reported in the Washington Post that Saudi authorities admitted they

thought that the sophisticated bomb making supplies uncovered were destined for a

major attack, possibly against a senior member of the Saudi royal family. The loss of

weaponry and the unprecedented intensive man hunt underway by Saudi officials may have been what drove the timing of the May bombings. Perhaps the terrorists suspected the Saudis were closing in, that their plans would be discovered and thwarted; they decided to attack immediately (Al-Saheil 2010).

The May 12, 2003 bombings were widely recognized as yet another wake-up call for the Saudi government (Miller 2003). However, this was different from the wake-up call after the 1996 bombings. In 1996, the target was "obviously" the U.S., now the objective was very possibly the overthrow of the royal family itself. The May 2003 bombings were a key indication that, as Mohammad al-Khereiji of Saudi Arab News put it to the BBC, "…the Americans were just an excuse. The people behind these attacks…are seeking political power in Saudi Arabia" (Kafala 2003, 1). Most experts even suggest that bin Laden's focus on U.S. troops was not just, or even primarily, about the west (Bodansky 2001). It represented a more expansive battle for followers between fundamental Islamic terrorists (Otterman 2003).

The reason behind the bombings is less important than the fact that they changed the attitude and behavior of the Saudi leadership. Prior to this, the Saudi government seemed to believe that the terrorist threat could be diverted rather than confronted, despite Al-Qaeda's calls for the end of the regime (Unger 2004). The government thought it could reduce the threat to itself by placating the terrorist, with money or limited opposition or ultimately the removal of U.S. troops. Now the rulers of the Kingdom saw Al-Qaeda as a mortal threat which must be met with force (Byman 2005).

In November2003, a subsequent bombing against another Riyadh housing compound which killed a large number of Muslims, should have reinforced to the Saudis the reality that their country was a terrorist target. Then, as if that attack were not enough, the next month's attack on an official of the Saudi Ministry of the Interior on Counterterrorism (GTD 2009) must have removed all pretext that the wave of terrorist attacks was the direct result of western occupation of the country. The stark reality of the country's vulnerability resulted in international terrorism becoming a high interest item for the Saudis, who greatly expanded their cooperation with international agencies (Darling 2003, Van Natta and O'Brian 2003). In fact the U.S. State Department *Patterns of Global Terrorism 2003* says that the attacks in that year "spurred an unprecedented level of cooperation with the United States" (67), a major change from the rivalry after the Khobar towers bombing.

After the 2003 terrorist attacks, Saudi Arabia became actively involved in anti-terrorism efforts domestically and internationally (Cordesman 2005) but the attacks continued. Even though the U.S. troops left in 2003, 2004 provided the largest number of attacks in the country in decades. These attacks, primarily against westerners, Saudi government officials and with one against the U.S. consulate, resulted in a continued strong anti-terrorism response from the Saudi government and its international allies. Following a very significant counter terrorism effort by the Saudis in 2003 and 2004, by 2005, the worst of the attacks had ended.

While al-Qaida in the Arabian Peninsula conducted more than a dozen attacks in the Kingdom in 2004, by year's end they were effectively wiped out (Martinage 2008).

The Saudi government had successfully countered the threat by responding to the attacks with one of the most "ambitious and wide-ranging counter-terrorism efforts" (Boucek 2008, 60) in the region. As part of this effort, the Saudi government implemented a number of traditional multilateral and unilateral measures, Table 6.3. In addition to the hard approach which was designed to mitigate international as well as domestic terrorism, they also undertook a "soft" program of reeducation and rehabilitation to win the war of ideas within the country (Ansary 2008). For the rest of the study period, the Saudis worked in relatively close cooperation with the international community to fight terrorism both in the country and globally. The limited number of attacks which occurred in 2006 and 2007 appeared to be isolated incidents (U.S. State Department), much like what had occurred while the base was in place, and may be considered a testament to the success of the Saudi's anti-terrorism campaign.

In conclusion, while initial analysis of the base-attack relationship in Saudi Arabia, particularly when just looking at the numbers, supports the hypothesis that the removal of the base was associated with an increase in number of terrorist attacks, there are other noteworthy factors which seem as significant, if not more significant, to the relationship than the base status change. The analysis reveals that, while U.S. base did receive a lot of attention as a potential threat to Saudi security, the actual increase in terrorist activity is difficult to attribute specifically to the base. The evidence indicates that there were country-by-country specific factors, both involving the base and separate from the base, which provide a fuller explanation for the increase in terrorist attacks in the post base timeframe.

Qatar

Now the study turns to Qatar. Officials in both the U.S. and Saudi Arabia feared

that the U.S. base at Prince Sultan would lead to additional terrorist attacks, even

though it did not. If, as some suggest, the base was a precipitant cause of terrorist

attacks, with country specific factors held constant, when the base moved to Qatar that

country should have experienced additional terrorist activity. It did not, supporting this

study hypothesis. But the question remains is there a causal linkage or just a casual

association between the expanded U.S. base and the reduced terrorist activity? That is

what the next section will examine.

Table 6.2 provides the information on attacks and U.S. presence in Qatar. It

indicates that Qatar, which established a large U.S. facility not far from its capital in

2003, saw no change in terrorist activity after the fact. It does seem important to note

that in 2001, before the U.S. presence at Al-Udied air base was expanded, the site was

attacked by an individual with a Kalashnikov assault rifle (GTD 2009). After the

development of the base, the only attack in the country was in 2005. That attack was

conducted by an individual, although an Al-Qaeda affiliated group later claimed

responsibility, against a theater popular with westerners.[35] The group which claimed

credit for the attack previously espoused a goal of establishing an Islamic caliphate in

the greater Syrian region which seems to have little to do with targeting Westerners in

Qatar. As might be expected from a group with this type of goal, no mention was made

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[35] There were reports a failed coup plot in Qatar in 2002 which was said to be related to the
government's plans to allow the U.S. increased access in the country. These reports were denied by the
Qatari government (Qatar denies 2002).

of the American base when credit for this most recent attack was claimed (GTD 2009). This means that, even though Qatar has served as host of a large military presence since 2003, the country has been relatively free of terrorist incidents (Blanchard 2008).

This finding is in line with Hypothesis 5 that a U.S. presence reduces the incidence of terrorist attack. But since the incidence numbers are low to start with it, is not a strong indicator. It may be more accurate to say that this is a more neutral indicator; there was no appreciable increase or decrease in number of attacks. While it would be comfortable to take this conclusion and be done, that would leave the deeper question of whether this statistic can reasonably be attributed to the addition of the base unanswered. The Saudis and U.S. thought that the presence of the base had resulted in, or would lead to, terrorist attacks in that country. Why was Qatar different? Why was the Qatari government accepting of the base? Did they recognize the base provided protection and was not, in and of itself, a provocation to terrorists?

Just as with the Saudi case, an examination of the historic relationship with the U.S., the domestic and regional issues, and the country's view of the terrorist threat should be informative. Qatar has had a history of strong relations with the U.S., dating back to its independence from Great Britain in 1971 (U.S. State Department). Qatari-U.S. relations "blossomed" (Sharp 2004, 8) during the 1991 Gulf war, when the country not only allowed U.S. forces to stage from its territory, but also provided some of its limited military to the U.S. lead military coalition to fight against the Iraqis. In the post war era, the country was more distant from the U.S., at times disassociating itself from the U.S. lead air strikes in the southern no-fly zone (Blanchard 2008). However,

because, like Saudi Arabia, Qatar relies on external support for security against

outsiders, it never moved far from the United States. Former U.S. Ambassador to Qatar,

Patrick N. Theros, noted that after 1991 "The Qataris have decided that their future lies

in having the closest possible ties with the United States" (in Sharnoff 2009, 2). What

factors might have lead to this decision?

One school of thought suggests that Qatar, which is more liberal than its larger

neighbor Saudi Arabia, welcomes westerners and the U.S. military in particular to raise

its status in the region and, partly, in fear of its more powerful neighbors (Abir 2002).

Even though the country disassociated itself from western action after the 1991 Gulf

war, its generally pro-western attitudes and interest in being seen as a leader in the

region made it attractive to the U.S. military. Additionally, Qatari-Saudi relations had

been strained since a border dispute in the 1990s. Any advance Qatar made in the

region, particularly at the expense of the Saudis, was seen as a plus by the Qatari

leadership. The reverse was true as well. As concerned as the Saudis were about a

large U.S. military presence in their country, they were apprehensive that the U.S. might

develop a "special military relationship with Qatar" (Terrill 2006, 38) at Saudi expense.

The American military presence may have been seen as a way for the Qatari

government to provide security without undertaking a massive military modernization

campaign (Blanchard 2008) while the small country tried to reach some ambitious goals

(Smith 2002). This is in line with traditional base politics thinking. By allowing a U.S.

base, the host country does not have to extensively modernize its military. Instead it

relies on U.S. forces for security, while it continues to develop domestic institutions and

expands its soft power resources (Meernik 2008). In Qatar's case, their focus on

diplomatic power rather than military power seems to have paid off handsomely.

Brodsky (2009) observes that Qatar emerged as a regional power broker in the

mid-part of the first decade of the 21st century, taking a leadership role in disputes

involving Syria, Iran, Hezbollah and during the Gaza crisis. Sharnoff (2009) notes that

the Qataris had a prominent role in mediating peace talks between Chad and Sudan

over refugees from Darfur, fighting between warring Lebanese groups, and talks

between Hamas and Fatah in Palestine. Brodsky (2009) further comments that this

could only have taken place because the traditional conflict regulators, including Saudi

Arabia had become ineffective.

These reasons may provide some idea why the Qatari government would agree

to, even facilitate, a large U.S. military installation; but they do not explain how, or if,

the base directly affected terrorist activity. Shortly after the base size increase, there

were suggestions that Qatar was opening itself to attacks. The government now fell into

the category of "the near enemy" for its support of U.S. policies. The U.S. troops and

the base were targets as "the far enemy" (Often the 2003). But the attacks did not

materialize. While literature might suggest this was the result of an increased anti-

terrorist capability brought about by the presence of the base (Blaker 1990; Crenshaw

1981), there are other possibilities as well. Another potential reason is similar to an

explanation mentioned for the lack of attacks in Saudi Arabia while Prince Sultan Air

Base was in operation: the government was paying off al-Qaeda (Mahnaimi 2005; Ulph

2005).

After the 2005 bombing, a *Times* news story quotes an unnamed Qatari official as saying "We are a soft target and prefer to pay to secure our national and economical interest" (Mahnaini 2005, 1). However, hard evidence of Qatari payments to terrorists is in short supply, just as it was for Saudi Arabia. Also, this tactic does not seem that it would be an effective deterrent against radicals who were strongly against the U.S. presence (Ulph 2006). But perhaps there was a different type of "payoff" or benefit to the terrorist groups for not attacking in Qatar.

It is possible that terrorist groups, particularly al-Qaeda, may have decided that some of the liberalization in Qatar, specifically uncensored media, worked to their benefit and they didn't want to upset the status quo. Qatar's openness provided a media outlet that al-Qaeda could used to spread their message to the world. Qatar is home to al-Jazeera, which is the most viewed station in the Arab world (Dajani 2007). Al-Jazeera, while funded by the Qatar royal family, had been given relative freedom to report events around the world. It had also become al-Qaeda's channel of choice for broadcasting messages from its leaders (Miles 2005). The station was one venue through which al-Qaeda and other terrorists disseminated their message.

The concept of a relatively uncensored news outlet in the Middle East is a new one, one that al-Qaeda uses to its advantage. Any terrorist attacks in Qatar could cause the government to heed western calls for a crack down on al-Qaeda's primary media outlet. While al-Jazeera may have been the news outlet preferred by al-Qaeda, and despite being called "mouthpiece of al-Qaeda" by Secretary of Defense Donald Rumsfeld (Cohen 2007) the station was not overly biased in its coverage. Hugh Miles,

author of a book about the station, says that al-Jazeera's coverage of the Iraqi invasion

generally balanced in that "it opposed Saddam's regime and opposed the invasion" (in

Hilton 2005, 1). The Qatari ruler, Sheik Hamad, said the freedom provided al-Jezeera

has "caused no end of problems..." (in Burns 1999, 2). The truth of his statement can be

seen in the fact that the station has drawn almost as much criticism from Qatar's gulf

neighbors, and even al-Qaeda, as it has from the west (Miles 2005).

Even if pay-offs, actual or practical, were the reason behind the low number of

attacks, they do not explain the U.S. decision. Why didn't the U.S. think a base in Qatar

would be the attack magnet they thought the base in Saudi Arabia had become? Could

it be that U.S. decision makers thought something other than the base was a more

significant factor in the terrorists' decision matrix?

The literature tells us that terrorists have psychological and structural factors

which motivate their actions and decisions. Perhaps because of differing structural

factors in the countries, a U.S. base in Qatar did not provide the same level of

psychological motivation as the base in Saudi Arabia did. For example, while Saudi

Arabia has been reluctant to implement social and political reform, Qatar has been

implementing political changes since the current emir overthrew his father in 1995

(Crystal 2005). Lieutenant Colonel Abdulla Al-Ammari (2005), a Qatari officer studying

at the Army War College, says that the people he has talked to say "the absence of

Democracy and individual freedom is the biggest problem in the Arab World" (6). If this

is accurate, then the significant liberal reforms in Qatar may have served to reduce the

psychological factors which motivated terrorist, and perhaps even raise the threshold

for what becomes a precipitant factor in the decision process. The counter argument is that Kuwait, considered by some to be the most liberal of the Gulf States (Herb 2009), had one of the highest incidents of terrorist attacks (GTD 2009). [36] The United Arab Emirates, one of the least liberal of the Gulf States had fewer attacks (GDT 2009).

Blanchfield (2002) considers Qatar the most liberal and progressive country in the region based on the fact that it is much more tolerant of western ideas and actions than it neighbors. After the 1995 coupe, Emir Hamad's active effort to appeal to the west while consolidating control of the country was the first salvo in this move toward liberalization. The country's openness may be attributable to demographics of the country and the makeup of the government as well (Rathmell and Schulze 2000). The Qatari population is relatively young and, due to the large number of foreign workers, is subject to many foreign influences. The U.S. State Department (2010) reports that about 75% of Qatar's 1.5 million inhabitants are foreigners; in Saudi Arabia the number is closer to 25%. The emir also made a concerted effort to fill the bureaucracy and armed forces with young, often western educated, people (Rathmell and Schulze 2000). While Rathmell and Schulze (2000) consider that these individuals may be more likely to hold progressive views, there has been no ground swell for liberalization by these individuals who benefit from the countries historic patriarchal system. The efficacy and intent of the reforms is questionable as well. Rosman-Stollman (2009) proposes that the Qatari reforms are "cosmetic" (187). They are designed to look good to the west

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[36] Freedom House's Freedom in the World Survey 2010 lists Kuwait as Partially Free and all other Gulf countries as Not Free.

and antagonize Qatar's Gulf neighbors to some extent, yet produce little real change in

the country.

The relatively large number of foreign inhabitants and a generally young and

more cosmopolitan bureaucracy appear to help foster greater acceptance of western

ways and ideas and could reduce the incentive for unrest. On the other hand, a number

of Gulf States have higher numbers of foreigners and are less accepting of western

ways. Furthermore, Teitelbaum (2009) explains that, in general, foreigners are given

little consideration in the liberalization policies of the Gulf countries. Perhaps it is the

lack of a strong base of opposition to the government, and not the presence of the large

U.S. base, that keeps the country safe. If terrorism is an effort to gain government

concessions (Kydd and Walters 2006), then if the government is already moving in the

desired direction there is little impetus to resort to violence for change.

The low incidence of unrest in the country does not mean that Qatar would not

be at risk for terrorist attacks. These factors must be balanced with the fact that Qatar

has a history of hosting radical Islamic figures from around the region (The Advent

2005). The 9/11 Commission report (National Commission 2004) says that members of

the Qatar royal family hosted and supported key Al-Qaeda leaders in the 1990s. There

also have been reports that some senior Al-Qaeda officials may have received some

support from Qatar after the 2001 bombings in the United States (Blanchard 2009a).

The presence of any number of radicals who could incite their followers to violence

must be considered when determining the threat. However, even with these potential

problems the U.S. has been steadfast in their praise of Qatari anti-terrorism efforts. The

State Department reports that Qatar has provided "significant" counterterrorism support since September 11, 2001 (Blanchard 2009).

This analysis seems to indicate that the permissive factors related to terrorist activity were not strongly motivational in Qatar. While there was some political dissention in the 50s and 60s, for the last half century the Qatari people have been generally free of any type of divisiveness or political dissention. Even the reforms undertaken by the emir were not been in response to popular discontent but were his initiative (Hawthorne 2003). The population seems to support the government and its anti-terrorism efforts. After the 2005 bombing, over 1000 people rallied against terrorism with BBC News service quoting one Qatari business man saying, "We are very angry with what is happened in our country and we will back our government in every way to make sure none of this will ever happen again" (Protest rally 2005, 1). These issues might help explain why the threat from terrorism would not have been as prominent a concern for either the U.S. or Qatar when considering the U.S. base build-up. They also provide alternate explanations to the greatly increased U.S. presence for why terrorism didn't rise.

Case Study Conclusions

Even though Saudi Arabia and Qatar appear to be very similarly situated with respect to a number of permissive factors for terrorism, they had different experiences with terrorist attacks during the period of the study. While the presence of a U.S. military facility is an identifiable difference between the countries, a causal relationship between the base and terrorist attacks is not readily apparent. The literature explains

that terrorism is a complex and amorphous subject (Hoffman 1996) and that its causes are difficult to understand (Richardson 2006). This implies that even in two similar countries, there may be sufficient variance in factors relating to terrorism to generate different outcomes. Cordesman (2005) provides a list of region-wide factors which could provide a cause for extremism, violence and terrorism. While not focused on the causes of terrorism, some of these potential causes of terrorism and how they differ between Saudi and Qatar will be addressed here.

Both of these countries are authoritarian and the governments maintain strict control over the country, although Saudi rulers do demonstrate a greater level of control. Freedom House (2010) rates both countries as "not free." But there are differences in how each country is perceived in some areas. One of these dissimilarities is the appearance of each country's government's willingness and ability to fight terrorism. The Saudi government arguably had what could be called confrontation avoidance strategy for dealing with terrorists.[37] Even though they were clearly Osama bin Laden's near-enemy since the Gulf War (Gerges 2005), the Saudi royal family was willing to look the other way when it came to terrorism, particularly if the violence was not directed at the regime (Darling 2003; National Commission 2004). In one example of this, Saudi officials suggested the attacks against Westerners in the early 2000s were personally rather than politically motivated (GTD 2009).

The circumstance around both the decision to permit the base in 1991 and the decision to remove it in 2003 could be interpreted as the Saudis' acting from a position

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[37] See Byman 2005 for a not well-substantiated but interesting discussion about the possibility the Saudi Royal family paid terrorist so they could avoid confronting them.

of weakness. In 1991, they invited the U.S. in because they needed protection. In 2003 they asked the U.S. to leave to remove a source of tension with terrorists, even though there had been only limited attacks for several years. Both of these decisions could have indicated to the terrorists that the Saudi government lacked the will or ability to confront them.

Crenshaw (1981) and Enders and Sandler (1999) tell us that government willingness and ability to counter terrorism is a central factor in terrorists' decision making. If they are correct, then in a county like Saudi Arabia with a spotty anti-terrorism record and which historically had relied on another nation, often the U.S., to supplement its defense, the terrorists might have seen the announcement of the base pullout as an admission of weakness by the government. If the government wanted the base removed because it was uncertain about its ability to combat terrorism in the country, then perhaps the time was ripe for attack. This reasoning might also explain why attacks continued for a couple of years until the government instituted stronger and more effective anti-terrorism measures, demonstrating both resolve and ability.

Perhaps because of the lower level of attacks in general, Qatar did not suffer from the perception they were unwilling or unable to fight terrorism. Qatar experienced two attacks in the years prior to the base but both are coded in the GTD as "possibly purely criminal act" (GTD 2009, Qatar). If these were criminal acts, then the country did not experience any attacks. Lack of attacks does not necessarily indicate

perception of a strong anti-terrorist program; there could be other reasons for deciding

not to use violence.[38]

On the other hand, the Qatar government was successful in preventing a coup

attempt in 2002 (Qatari 2002). This could indicate a robust intelligence and security

apparatus which would deter terrorism even prior to the U.S. base presence. Qatar

invited the U.S. presence, not because it was under threat, but rather to expand its

relationship with the United States. Moreover, it did this when many, including its

neighbors the Saudis, thought that U.S. bases increase the threat of terrorist activity.

Applying the same logic leads to the belief that Saudi Arabia could be seen as weak by

asking the U.S. to leave; the Qatari government could have been seen as strong against

terror for allowing the U.S. to relocate to its country. Additionally, by cooperating with

international counter-terror efforts and being a "significant" support of U.S. counter-

terror efforts (U.S. State 2005) Qatar has positioned itself to seen as capable and willing

to fight terrorism.

Another significant difference between the two countries which could contribute

to the differing experience with terrorism is population. In the quantitative models,

population was the factor most consistently positively associated with terrorist attacks

and Saudi Arabia has a much larger population than Qatar. But the association must go

beyond just numbers. The population in Saudi could be considered somewhat grievance

prone, making demands for reforms on the government. Some of the terrorist attacks,

like the airline hijacking in 2000, were specifically aimed at the government (GTD 2009).

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[38] For example, Qatar reportedly had the same type of conflict avoidance strategy that the Saudis did
when it came to dealing with terrorism, including paying off the terrorists (Mahnaimi 2005; Ulph 2005).

Others, like the bombings in 2003, were believed to be related to attacks against the government (Gause 2003b). So while the Saudi royal family maintains a strong hold on the country, there is a dissatisfied element within the population with what they consider legitimate grievances against the government. Terrorism can result from this grievance base (Abrahms 2008). The Saudi position is further complicated by the fact that the country is the defender of the holiest of Islamic sites, Mecca and Medina. Unhappiness or even anger with the government's actions in this role can bring the potential for international attention. F. Gregory Gause, a respected Middle East scholar, said that terrorists have the goal of overthrow of the Saudi regime because it is "not a Muslim regime" (in Gwertzmann 2003, 4).

Qatar not only has a smaller population, it is also a country with minimal sectarian, ethnic or political division (Hawthorne 2003) and negligible internal opposition (Crystal 2005). While some elements of the population in Saudi are clamoring for liberal reform with limited success, Qatar undertook liberal reforms at the initiative of the emir, not as a result of popular pressure (Rosman-Stollman 2009). While scholars may consider the efficacy of these reforms questionable, there is some evidence that elements of the population believe that "some form of democracy is being constructed" (Rosman-Stollman 2009, 207). This perception of progress may help to keep grievances low and terrorists' motivation at bay.

Both Saudi and Qatar are rentier states, relying on income from natural resources to provide government revenues (Winckler 2009). In the Gulf States, oil and gas revenues allow the governments to pay their people in exchange for a lack of

opposition. However, when rents (oil and gas prices) fall, there is less money to go around and payments may fall. The population can interpret that as the government reneging on their social contract, generating unrest. During the recent economic downturn Qatar fared much better than other Gulf States for several reasons (Rosman-Stollman 2009). This means Qatar's population also did not suffer financially at the same level as the Saudi population did, and should have remained more content.

The strategic model suggests that terrorism is an effort to win concessions from the government (Abrahms 2009). If the government is already liberalizing and if the people remain generally content, concessions are not demanded. It follows that this results in fewer grievances and, so the theory goes, there is less terrorism. The smaller population provides other advantages for authoritarian states like those in the Gulf as well. It provides the Qatari government with additional control over the population and facilitates intelligence gathering reducing political opposition (Gause 2003).

Summary

The conclusion from the analysis of Saudi Arabia and Qatar is similar to that of the prior section of the qualitative study. While Saudi Arabia and Qatar had numerical finding in support of the hypothesis, the more detailed examination indicated that there appears to be a number of country specific factors which have equal or greater explanatory effect on terrorist attacks. In Saudi Arabia, domestic issues—the regime's slow pace of modernization, an unwillingness to admit to an internal threat, and a growing anti-western sentiment—arguably provided the permissive environment which

could have allowed a number of factors, possibly even the presence or removal of the base, to be the precipitant cause of the increased number of attacks.

There were a number of international factors in play as well. Osama bin Laden was using the U.S. base as a recruiting tool and was using it to foment discontent against both the U.S. and Saudi Arabia. The September 11, 2001 attacks in the United States created a set of circumstances that increased domestic discontent and provided additional issues for outside agitators. If McMillan (2002) is correct when he says that "Military cooperation with the United States has *always* (emphasis mine) had the potential for damaging Saudi Sovereignty and political and religious legitimacy in ways that have no parallel in most other countries, including the other Gulf States" (1), then it was only after the permissive factors were in place that this cooperation should be considered a causal factor for the attacks. This would point toward the conclusion that attacks may have taken place with the base present or not; its removal was not precipitant: its presence had become one of the permissive factors. As argued above, it was not the base removal that generated the increase in attacks; it was what the base removal represented that was important.

The situation in Qatar was quite different. Qatar installed the base and, as hypothesized, the incident and number of terrorist attacks went down. But, while the addition of the base reduced the terrorist attacks, again there was little to provide a causal link. The permissive factors which might lead to a terrorist attack were less evident in Qatar. The country was undertaking both political and social modernization. There was little to no internal discontent or anti-western sentiment in the country. The

Qatari leadership did not have a responsibility to maintain and protect the holy sites of

Islam limiting the avenues for outside interference in the country. All of these reasons

and host of others provide possible explanations for why these two countries would

have such differing experience with terrorism, swapping the U.S. base notwithstanding.

Table 6.1
Saudi Arabia

Year	99	00	01	02	03	04	05	06	07	08
Bases	1	1	1	1	0	0	0	0	0	0
Personnel	4862	5276	4802	6114	385	228	269	280	257	276
Attack	0	5	1	2	8	18	0	3	1	0

Table 6.2
Qatar

Year	99	00	01	02	03	04	05	06	07	08
Bases	0*	0*	0*	0*	1	1	1	1	1	1
Personnel	39	53	72	88	2491#	272#	387#	428#	419#	425#
Attack	0	1	1	0	0	0	1	0	0	0

* Officially there was a small storage depot in Qatar prior to 2003 but for purposes of this study 2003 is considered when Qatar opened its U.S. installation.

At this point, many of the personnel at Al Udied were reported in the personnel documents as part of "individual in support of Operation Iraqi Freedom: and were not listed separately. However, Air Force sources estimate between 4000-7000 personnel were deployed to Al Udied during these years.

Table 6.3
Saudi Counter-terrorism Measures

Unilateral Measures against Money Laundering and Terror Financing	
Financial Intelligence Unit (2003) (under the Ministry of Interior)	Deal with economic and financial crimes, coordinate money laundering cases with SAMA's Anti-Money Laundering Unit
High Commission for Oversight of Charities (2002)	Provide assistance to Saudi charities in reforming their operations and improving transparency
New Banking Regulations (2003)	Create prohibitions on private charities
Anti-Money Laundering Law (2003)	Criminalize money laundering, terrorist financing ,terrorist acts and organizations
Submission to FATF of self-assessment Questionnaire on 8 Recommendations	Ensure compliance with FATF
Royal Decree (2004) on creating the Saudi Nongovernmental Commission on Relief and Charity Work Abroad	Monitor all private Saudi donations marked for international distribution
Banning Al Haramain Islamic Foundation, Joint designation of 11 overseas branches of Al Haramain for terrorist activities	Respond to a former Al Haramain employee was suspected to be involved in the 1998 U.S. embassy bombing Tanzania
Bilateral Cooperation with the UK. and U.S.	
Joint Task Force on Intelligence and Finance	Track the perpetrators of the 2003 Riyadh bombings
FBI and IRS cooperation	Create a strong financial intell unit
Multilateral Cooperation	
Arab League	Join a multilateral agreement on fighting terrorism.
GCC FATF	Exchange information on relevant issues
MENAFATF	Coordinate with Middle Eastern and North African countries on financial issues
FATF	Comply with FATF recommendations
IMF sponsored Financial Sector Assessment Program (FSAP)	Reform financial sector
Sources: Alfred B. Prados, and Christopher M. Blanchard, "Saudi Arabia: Terrorist Financing Issues," *CRS Report for Congress*, Updated March 1, 2005; Alfred B. Prados, "Saudi Arabia: Current Issues and U.S. Relations," *CRS Report for Congress*, Updated February 24, 2006; Anthony Cordesman, "Saudi Arabia: Friend or Foe in the War on Terror?" *Middle East Policy*, Vol. # XIII, No. # 1, (2006), pp. # 28-41; Anthony Cordesman, *Saudi Arabia Enters the Twenty-First Century: The Political, Foreign Policy, Economic, and Energy Dimensions*, Westport, CT: Praeger, 2003, pp. 215-223; Saudi Arabian Monetary Agency, *A report on Initiatives and Actions taken by Saudi Arabia to combat Terrorist Financing and Money Laundering*, 2004; U.S. Department of State, *The Antiterrorism Assistance Program: Report to Congress for Fiscal Year 2003*, The Bureau of Diplomatic Security and the Office for the Coordination of Counterterrorism, DOS, 2005; U.S. Department of State, *International Narcotics Control Strategy Report 2005*. Bureau for International Narcotics and Law Enforcement Affairs, DOS, Released March 2005.	

(Table taken from Ashraf 2007and adapted)

Chapter 7
Summary and Discussion

This final chapter provides a brief overview of the study and its methodology and then summarizes the results from chapters four, five and six. The primary focus of the chapter is to discuss the study's relationship to the literature and the implications of its results for basing policy and academic research. The quantitative section reveals that, generally, there is no significant relationship between U.S. bases and terrorist attacks in the country when analyzed at the global or regional levels. It also identifies a potential methodological difficulty cause by the distribution of the data when attempting to analyze counts of base or personnel and terrorist attacks. This could have an impact on future work and on the application of results from some prior studies. The qualitative research also did not uncover a causal relationship between U.S. bases and terrorist attacks. Rather, it supports the idea that incidences of terrorist attack in a country arise from a complex interaction of domestic and international factors, of which a U.S. base may be one. The findings further indicate that excluding enough of these factors to attribute causality to an individual factor with any significant level of academic rigor is problematic.

In an effort to understand the effects of the U.S. overseas basing structure on host nation security, this dissertation examined the question: What, if any, effect has the presence or number of U.S. military overseas installations had on the incidence of terrorist activity in the host country in the first decade of the 21st Century? The central hypothesis was that a U.S. base or a larger number of U.S. bases in a country would reduce the incidence or number of terrorist attacks. The methodology was a mixed

methods quantitative-qualitative design covering the years 1999-2008. The quantitative

section evaluated the relationship at the global and regional levels using panel data

analysis to allow for longitudinal study across both time and space (Yaffee 2003). The

qualitative section used an intervention analysis methodology, examining how a specific

event affected the processes under consideration. The installation or removal of the

U.S. base was considered the intervention and terrorist attacks were the processes. In

this section, the study considered the 18 occasions when the first U.S. base was installed

in a country or the last U.S. base was removed from a country. The study then

conducted a comparative case study of Saudi Arabia and Qatar. These two were

examined in depth because they are very similarly situated, the functions from the base

in Saudi Arabia were transferred to the base in Qatar during the study period, and they

had very different experiences with terrorist attacks.

The quantitative results demonstrated that at the global and regional levels, with

few exceptions, there is no statistically significant relationship between the presence or

number of U.S. bases in a country and the incidence or number of terrorist attacks in the

country. The only global level relationship identified was that the number of bases in a

country was negatively correlated with the number of attacks in the country with a

coefficient of -.005 significant at $p<.10$ with a two-tailed test. However, data

distribution issues reduce the impact of this result.

The NORTHCOM area did provide a significant negative association in the three

models which provided results (there were no NORTHCOM results for one model,

incidence of attack and base presence, due to missing predictions). However, these

results must be tempered by the limited data in this region. In the study, NORTHCOM represents only three countries, Canada, Mexico, and Cuba. The rest of the countries in the area of operations did not have sufficient explanatory variable information to include them in the analysis.

SOUTHCOM provided a positive association between numbers and presence of U.S. bases and terrorist attacks in all models except when testing the relationship between incident of attack and base presence. But these findings are mitigated by the affects of the large numbers of both bases and attacks in Columbia and the fact that, generally, the bases in the region have a counter-drug mission. When Colombia is removed from consideration, only the study of number of bases and number of attacks remains significant.

The other factor influencing the positive relationship between bases and attacks in this region is that, for the most part, the bases in this region have a specified counter-drug mission. The groups involved in the drug trade in this region are often associated with or are the ones involved in terrorist attacks. The direct relationship between bases, the drug trade and groups inclined to commit terrorist acts makes the positive association very understandable, but limits its application to other situations.

PACOM provided a negative association between both the number of U.S. bases and the presence of a U.S. base and number of terrorist attacks. All of the other explanatory variables demonstrated a positive association for these two models. This is the only region which has this consistent dichotomy.

The qualitative analysis took a country by country look at the circumstances around each terrorist attacks before, during and after, as applicable, the presence of a U.S. base in 13 countries. Without exception, the U.S. base could not be directly associated with any of the attacks in any of the countries. There are two cases, Uzbekistan and Ecuador, where an argument can be made that the base was a precipitant cause of an attack. However, even in these countries there is no direct evidence that the base was a causal factor and no generalizations can be made from these data.

A comparative case study of Saudi Arabia and Qatar was performed to see how the transfer of a base between these two similar countries was associated with attacks in the countries. While there was an increase in number of attacks in Saudi Arabia directly following the removal of the base, providing a statistical association and supporting the hypothesis; there is no indication that there was any causal relationship between the base status change and the attacks. It seems far more likely that the perception of a relatively ineffective Saudi counter-terrorism policy was a more significant explanatory factor for the increase in attacks. Further, Saudi policy emerges as a likely causal factor in part because the number and incidence of attack decreased dramatically with the advent of a much more stringent policy focused on both punishment and rehabilitation of terrorists.

The results were similar for Qatar. There was a nominal decrease in attacks after the U.S. base arrived, but there is no evidence that the base was in any way responsible for this lower level of attacks. The Qatari government's strong anti-terrorism measures

combined with a generally satisfied population are the factors which seem to account for the low level of terrorist attacks in that country before and during base presence.

Relationship to Prior Research

Basing Research

The change in the international security environment from Communism to terrorism occurred relatively recently so understandably there has been little work done on its affect on base politics. This study indicates that the findings of the base politics literature grounded on the Cold War threat concept still have validity in the new era of the terrorism threat. Theoretical constructs like basing being a two-level game (Cooley 2008) and the broader utilitarian/humanitarian argument to justify basing (Lutz 2009) seem to apply to the new environment as well as they did to the old. Nonetheless, the changing character of the global security environment generated a number of complications for U.S. overseas basing architecture and strategy. As the U.S. retooled its foreign policy in the 21st century, the changed international environment, accompanied by domestic budgetary pressures, necessitated a review of military basing. New security strategies focusing on small foot prints, Cooperative Security Locations and other "lily-pad" sites required a change in how overseas base locations are chosen and negotiated.

One question arising from these changes was whether the U.S. base still provided the host nation security, as it had in the past (Calder 2007). This became an important issue as the U.S. planned its transition to a greater number of smaller bases in more locations to support its new 2002 National Security Strategy. During the

negotiation process for basing rights in the post Cold War environment, the idea that the presence of a U.S. base would increase the threat rather than decrease it has been raised as a concern in several instances (for examples see Alyawm 2009; Arkin 2002; Caroll and MacAskill 2009: and Diehl 2009). This study demonstrates that the veracity of such a claim cannot be supported with data analyzed quantitatively at the global or regional level. Any support for such a claim must be developed on a case by case basis at the country level. However, even at the country level, this study found no support for the claim in the cases examined.

The study notes that much of the current discussion about American Empire, the concept that America is an expansionist country using economic, political and military hegemony to control other countries and which is often justified by noting the number and location of U.S. overseas bases, contains hyperbole and exaggeration.[39] Trumpeting numbers like 1000 bases, or even the more accurate 737, without highlighting the fact that about 90% of U.S. overseas bases are in four countries, Germany, Japan, South Korea and Italy, or that about 42% of U.S. overseas bases are in one country, Germany, suggests that these authors are not presenting a balanced view of effects of basing. Additionally, policy makers should temper acceptance of recommendations that the U.S. pull back from its overseas presence in an effort to reduce terrorism, like those made by

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[39] Books like Andrew Bacevich's *American Empire,* or Chalmers Johnson's *Dismantling the Empire, Blowback, or The Sorrows of Empire* are examples of this literature. There is a website "The American Empire Project" http://www.americanempireproject.com/ which contains an extensive list of works relating to American Empire.

Pape (2005), with the knowledge that such actions may not be effective in a large number of situations.[40]

Terrorism Research

The seemingly stochastic association of the explanatory variables with terrorist attacks uncovered while conducting global and regional analysis coupled with the qualitative section's finding that terrorist attacks are the result of complex interactions of domestic and international factors find support in the literature: the root cause of terrorism is poorly defined and understood (Richardson 2006). Even the findings from the comprehensive case study of Saudi Arabia and Qatar do not provide much valuable insight into the cause of terrorism, apart from demonstrating terrorism is not a function of U.S. basing. Two factors emerged which seem to contribute to their different experiences with terrorism: governmental will or perceived ability to fight terrorism and a level of popular discontent with the government. However, both of these constructs are ambiguous and can be operationalized by many different things. They do not provide the essentials for a comprehensive theory of terrorist behavior because they do not lend themselves to quick categorization and analysis of specific variables.

The study's findings call into question much of the literature about the relationship between basing and terrorism. However, the generally inconclusive results of this study so seem to be in line with the massive quantity of terrorism specific literature emerging since 2001 which provides extensive investigation into causal factors of terrorism and emerges with extremely specific, diverse and often conflicting results

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[40] Dr. Pape's research is specific to suicide attacks which comprise less than 2% of the attacks in the GTD.

(Campos and Gassebner 2009). Perhaps this is indicative of the trend in social science research toward what Meade (2010) identifies as "scholasticism." Meade opines that political scientists are now so focused on narrow questions and methods that many of their works lack relevance. According to Meade (2010), this narrowing of focus, often in an effort to establish scientific rigor to a study, results in precisely defined and analyzed conclusions which then often do not reflect political, societal or social reality.

I would argue that an examination of the plethora of terrorism literature published after the September 11, 2001 attacks supports Meade's argument. Jackson's (2009) article surveying contemporary terrorist research emphasizes that the post 2001 research demonstrates "a narrow focus on a restricted set of topics" (171). Perhaps a single-mined focus on attempting to explain terrorist behavior as the function of a specific identifiable variable or set of specific variables which can be addressed by policy makers leaves little room for the idea that terrorism may be the result of some mix of variables which is particular to an individual situation. The effort to find (or publish) a single best (policy relevant) answer to what causes terrorism may be detrimental to developing a fuller understanding of how terrorists' actions are the result of multiple factors which combine in varied ways based on the proximate circumstances.

Basing and Terrorism Research

The study identified a methodological concern important to scholarship which uses count data to examine global relationships between U.S. presence and terrorist attacks over time. At the global level, count data for U.S. presence and terrorist attacks are distributed such that, at least in the period of this study, the country/years which

account for 96.6% of the number of attacks account for only 22.2% of number the

bases. Similarly, the years which account for 81% of the number of bases contain less

than 1% of the number of attacks. Compounding the distribution problem,

approximately 57% of the attack count occurs where there are no bases and

approximately 29% of the bases are located where there are no attacks. A similar

(mal)distribution is found when U.S. presence is measured by personnel, much more

common in the literature. The uneven distribution of these data seems to indicate that

results from designs using counts of these factors must be given careful scrutiny before

being accepted. This distribution problem seems to represent a significant

methodological quandary for research designs using either base count or personnel

numbers while conducting global level analysis of terrorist attacks over time.

Another methodological difficulty affects scholarly articles with a global level of

analysis and when U.S. presence is used in conjunction with variables chosen to control

for permissive factors related to terrorism. This study found that auxiliary regression

identified that many of these factors may have collinearity issues with U.S. presence

data. Therefore, studies that wish to evaluate number of bases, or personnel, in

conjunction with data collected at the country level, like GDP, Gini, population, type of

government, or government duration must have a design which compensates for the

effects arising from the possible collinearity with the military presence data.

Implications for Policy

While there has been scholarly examination of the concerns arising from basing

decisions from both the U.S. and the host nation perspective, the end of the Cold War

has added considerations to the mix. The transition from structured conventional state-based threats to more amorphous terrorist threat has changed, in some ways, our understanding of how a U.S. installation affects host nation security. In the new security environment, particularly in countries with a minimal U.S. presence such as those in South America, Eastern Europe or Central Asia, as the base politics process takes place, the concern that a U.S. presence will add to the threat of the host country often arises. While this research demonstrates that there is little, if any, empirical evidence to support that argument, it does not indicate disregard for these concerns. Rather the results point to the conclusion that global and regional terrorist research must be considered with caution, and country-specific factors should be given the most importance both when conducting base politics discussion and when evaluating potential terrorist threats to a country.

This research does not advocate against a policy objective of reducing the number of U.S. bases overseas. There are many factually accurate and politically relevant reasons for reducing the size of the U.S. presence overseas (see Basevich 2010, Englehardt 2010, and Johnson 2010 for some recent arguments). However, the idea that U.S. overseas presence increases the terrorist threat in the host country is not one of them. Defense of the U.S. and the host country are still vital considerations in the base politics decision matrix. Fear of a terrorist attack in a host country as a result of a basing decision should not be a primary consideration in these discussions except as indicated by specific factors in that country. Ultimately, this research indicates that there is no evidence that installing a base in a country has any relation to the number of

terrorist attacks in that country. Nor is there evidence that removing a base from a

country will have any significant effect on terrorist attacks in that country.[41]

Recommendations for Future Research

Methodological Research

This research identified a number of areas for follow-on work. One is to examine

what factors contribute to the inconsistency in the measures of multi-collinearity among

the potential explanatory variables. While auxiliary regression indicated that the U.S.

presence variable was collinear with most combinations of variables associated with

terrorism, the Variance Inflation Factor did not identify the association. It would be

advantageous to determine what about these variables creates this disconnect. The

distribution of bases may be a part of the answer. If so the new policy calling for fewer

and smaller bases but located in more countries may affect this phenomenon in future

research. The findings indicate the need for a methodological study of the relationship

between counts of U.S. presence and terrorist attacks as well. A structured exploration

of how the dispersion issues can be accounted for while maintaining the global

population could be extremely useful and would provide a methodology for validation

of existing research using count data for U.S. presence or terrorist acts.

Terrorists' Motivation

While the study seems to clearly demonstrate that, analyzed at the global level,

there is no relationship between U.S. overseas bases and terrorist attacks in the host

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[41] The essential caveat at this juncture is that the findings do not apply to states in which the U.S. is engaged in armed conflict.

country, this study's evaluation of Saudi Arabia and Qatar does suggest that U.S. bases might be influential as a country specific factor acting *as one* of the socio-cultural explanations of terrorists' motivation. A detailed study of the effects of basing on terrorist attacks in a country which include base size, location (urban or rural), usage (joint operations with host country, primarily equipment storage, major operating facility), or even host military service (Army, Navy, Air Force, or Marine) should be very informative in understanding this relationship.

This research avenue would be instructive in determining how the shift from contemporary Cold War style basing to the new smaller "lily-pad" basing may affect the security situation in a particular country. Even while acknowledging that circumstances in every country are unique, such research may identify factors which could then be examined to see how they influence action in other countries. The research could potentially identify situations when larger bases may be preferable to smaller ones or rural facilities preferable to urban bases given other country-specific factors.

Basing Research

Related research should also address the idea that basing decision are occurring more often with any individual state. The new security strategies focusing on small foot prints, Cooperative Security Locations and other "lily-pad" sites require a change in how base locations are chosen and negotiated. Basing agreements have been continuous or iterative processes, subject to change over time. Experience with some of these newer and smaller locations indicates that the time-line for renegotiation may be shortening (Hyland 2007). If rights must be regularly renegotiated, there may little incentive for the

U.S. to undergo any significant costs related to the basing decision which could then affect that decision. If there are few sunk costs in the form of U.S. - provided infrastructure, the U.S. has more flexibility during negotiations. By the same token the host country has more incentive to renegotiate to gain greater benefit. Clark-Sestak (2003) explains that the new U.S. basing construct reduces the economic and political benefits historically enjoyed by the host. There are undoubtedly many different factors which would enter into this type of analysis but general trends may quickly be identifiable. An analysis of the frequency with which basing rights are negotiated, and renegotiated, could provide valuable insight for future basing decisions.

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Appendix A

Source of Base Information by Country

Country	Source
Afghanistan	Current Conflict
Antigua and Barbuda	BSR
Aruba	BSR
Australia	BSR
Austria	BSR
Bahamas, The	BSR
Bahrain	BSR
Belgium	BSR
Bosnia and Herzegovina	NATO website
Bulgaria	State Department
Canada	BSR
Colombia	BSR
Cuba	BSR
Denmark	BSR
Djibouti	BSR
Ecuador	BSR
Egypt, Arab Rep.	BSR
El Salvador	Global Security Website
France	BSR
Germany	BSR
Greece	BSR
Greenland	BSR
Honduras	BSR
Hungary	State Department
Iceland	BSR
Indonesia	BSR
Iraq	Current Conflict
Italy	BSR
Japan	BSR
Kenya	BSR
Korea, Rep.	BSR
Kuwait	Global Security & Dept of the Army
Kyrgyz Republic	Global Security
Luxembourg	BSR
Macedonia, FYR	Global Security & Dept of the Army
Marshall Islands	BSR
Netherlands	BSR

Netherlands Antilles	BSR
New Zealand	BSR
Norway	BSR
Oman	BSR
Panama	BSR
Peru	BSR
Portugal	BSR
Qatar	BSR and Global Security
Romania	State Department
Saudi Arabia	Global Security website
Serbia/Kosovo	Stripes Newspaper
Singapore	BSR
Spain	BSR
Turkey	BSR
United Arab Emirates	BSR
United Kingdom	BSR
Uzbekistan	Department of the Air Force
Venezuela, RB	BSR

Appendix B

List of Countries in Region

PACOM		EUCOM	
Australia	Nauru	Albania	Kosovo
Bangladesh	Nepal	Andorra	Latvia
Bhutan	New Zealand	Armenia	Liechtenstein
Brunei	North Korea	Austria	Lithuania
Burma	Palau	Azerbaijan	Luxembourg
Cambodia	Papua New	Belarus	Macedonia
China	Guinea	Belgium	Malta
Fiji	Philippines	Bosnia and	Moldova
India	Samoa	Herzegovina	Monaco
Indonesia	Singapore	Bulgaria	Montenegro
Japan	Solomon Islands	Croatia	Netherlands
Kiribati	South Korea	Cyprus	Norway
Laos	Sri Lanka	Czech Republic	Poland
Malaysia	Thailand	Denmark	Portugal
Maldives	Timor-Leste	Estonia	Romania
Marshall Islands	Tonga	Finland	Russia
Micronesia	Tuvalu	France	San Marino
Mongolia	Vanuatu	Georgia	Serbia
	Vietnam	Germany	Slovakia
		Greece	Slovenia
		Hungary	Spain
		Holy See	Sweden
		Iceland	Switzerland
		Ireland	Turkey
		Israel	Ukraine
		Italy	United Kingdom

NORTHCOM	AFRICOM		SOUTHCOM
Aruba	Algeria	Liberia	Antigua and
Bahamas	Angola	Libya	Barbuda
Bermuda	Benin	Madagascar	Argentina
Canada	Botswana	Malawi	Barbados
Channel Islands	Burkina Faso	Mali	Belize
Cuba	Burundi	Mauritania	Bolivia
Mexico	Cameroon	Mauritius	Brazil
	Cape Verde	Morocco	Cayman Islands
	Central African	Mozambique	Chile
	Republic	Namibia	Colombia
CENTCOM	Chad	Niger	Costa Rica
	Comoros	Nigeria	Dominica
Afghanistan	Congo, Republic	Rwanda	Dominican
Bahrain	of	Sao Tome and	Republic
Egypt	Congo,	Principe	Ecuador
Iran	Democratic	Senegal	El Salvador
Iraq	Republic of The	Seychelles	Grenada
Jordan	Cote d'Ivoire	Sierra Leone	Guatemala
Kazakhstan	Djibouti	Somalia	Guyana
Kuwait	Equatorial	South Africa	Haïti
Kyrgyzstan	Guinea	Sudan	Honduras
Lebanon	Eritrea	Swaziland	Jamaica
Oman	Ethiopia	Tanzania	Nicaragua
Pakistan	Gabon	Togo	Panama
Qatar	The Gambia	Tunisia	Paraguay
Saudi Arabia	Ghana	Uganda	Peru
Syria	Guinea	Zambia	St. Kitts and Nevis
Tajikistan	Guinea-Bissau	Zimbabwe	St. Lucia
Turkmenistan	Kenya		St. Vincent and the
U.A.E.	Lesotho		Grenadines
Uzbekistan			Suriname
Yemen			Trinidad and
			Tobago
			Uruguay
			Venezuela

Appendix C

Model Comparison

Comparison of Mean Observed and Predicted Count

Model	Max Diff	At Value	Mean |Diff|
Poisson Regression Model (PRM)	0.556	0	0.099
Negative Binomial Regression Model (NBRM)	0.046	1	0.011
Zero Inflated Poisson (ZIP)	0.116	1	0.027
Zero Inflated Negative Binomial (ZINB)	0.046	1	0.011

Poisson Regression Model (PRM): Predicted and actual probabilities

Count	Actual	Predicted	|Diff|	Pearson
0	0.565	0.009	0.556	5.4e+04
1	0.116	0.029	0.087	417.581
2	0.061	0.050	0.011	3.537
3	0.025	0.066	0.041	39.688
4	0.026	0.074	0.048	49.157
5	0.023	0.076	0.053	57.508
6	0.011	0.072	0.061	81.402
7	0.010	0.065	0.055	72.603
8	0.010	0.056	0.046	59.503
9	0.011	0.047	0.037	44.339
Sum	0.859	0.545	0.995	5.5e+04

Negative Binomial Regression Model (NBRM): Predicted and actual probabilities

Count	Actual	Predicted	|Diff|	Pearson
0	0.565	0.590	0.025	1.653
1	0.116	0.070	0.046	46.841
2	0.061	0.039	0.023	20.572
3	0.025	0.027	0.001	0.110
4	0.026	0.021	0.006	2.330
5	0.023	0.017	0.006	3.681
6	0.011	0.014	0.003	1.123
7	0.010	0.012	0.002	0.441
8	0.010	0.011	0.000	0.017
9	0.011	0.009	0.001	0.372
Sum	0.859	0.809	0.113	77.139

Zero Inflated Poisson (ZIP): Predicted and actual probabilities

Count	Actual	Predicted	|Diff|	Pearson
0	0.564	0.564	0.000	0.000
1	0.116	0.000	0.116	6.0e+05
2	0.061	0.000	0.061	4.2e+04
3	0.026	0.000	0.025	2411.529
4	0.026	0.001	0.025	1038.804
5	0.023	0.002	0.021	368.169
6	0.011	0.003	0.008	27.790
7	0.010	0.005	0.005	8.555
8	0.010	0.007	0.003	2.365
9	0.011	0.009	0.002	0.587
Sum	0.859	0.592	0.267	6.5e+05

Zero Inflated Negative Binomial (ZINB): Predicted and actual probabilities

Count	Actual	Predicted	|Diff|	Pearson
0	0.564	0.590	0.025	1.722
1	0.116	0.070	0.046	47.366
2	0.061	0.039	0.022	20.148
3	0.026	0.027	0.002	0.149
4	0.026	0.021	0.005	2.114
5	0.023	0.017	0.006	3.379
6	0.011	0.014	0.003	1.257
7	0.010	0.012	0.002	0.530
8	0.010	0.011	0.001	0.039
9	0.011	0.010	0.001	0.287
Sum	0.859	0.811	0.114	76.992

Tests and Fit Statistics

		Poisson				
		BIC=108450.192	AIC= 76.418	Prefer	Over	Evidence
	vs NBRM	BIC= -4522.433	dif=112972.625	NBRM	PRM	V. strong
		AIC= 4.458	dif= 71.960	NBRM	PRM	
		LRX2= 1.13e+05	prob= 0.000	NBRM	PRM	p=0.000
	vs ZIP	BIC= 62671.059	dif= 45779.133	ZIP	PRM	V. strong
		AIC= 47.352	dif= 29.066	ZIP	PRM	
		Vuong= 9.426	prob= 0.000	ZIP	PRM	p=0.000
	vs ZINB	BIC= -4525.738	dif=112975.930	ZINB	PRM	V. strong
		AIC= 4.439	dif= 71.979	ZINB	PRM	

		Negative Binomial Regression				
NBRM		BIC= -4522.433	AIC= 4.458	Prefer	Over	Evidence
	vs ZIP	BIC= 62671.059	dif=-67193.492	NBRM	ZIP	V. strong
		AIC= 47.352	dif= -42.894	NBRM	ZIP	
	vs ZINB	BIC= -4525.738	dif= 3.305	ZINB	NBRM	Positive
		AIC= 4.439	dif= 0.019	ZINB	NBRM	
		Vuong= 1.026	prob= 0.152	ZINB	NBRM	p=0.152

		Zero Inflated Poisson				
ZIP		BIC= 62671.059	AIC= 47.352	Prefer	Over	Evidence
	vs ZINB	BIC= -4525.738	dif= 67196.797	ZINB	ZIP	V. strong
		AIC= 4.439	dif= 42.913	ZINB	ZIP	
		LRX2=67204.153	prob= 0.000	ZINB	ZIP	p=0.000