



Calhoun: The NPS Institutional Archive
DSpace Repository

Faculty and Researchers

Faculty and Researchers' Publications

2007-06

Counterterrorism Tactics: A Model of Cell Dynamics

Giebel, Kathleen

Counterterrorism Tactics: A Model of Cell Dynamics, ENS. Kathleen Giebel - Navy
Postgraduate School, papers
<http://hdl.handle.net/10945/37479>

Downloaded from NPS Archive: Calhoun



Calhoun is the Naval Postgraduate School's public access digital repository for research materials and institutional publications created by the NPS community. Calhoun is named for Professor of Mathematics Guy K. Calhoun, NPS's first appointed -- and published -- scholarly author.

Dudley Knox Library / Naval Postgraduate School
411 Dyer Road / 1 University Circle
Monterey, California USA 93943

<http://www.nps.edu/library>

Paper Submission for:
12th International Command and Control Research and Technology Symposium:
“Adapting C2 to the 21st Century”

Title of Paper

“Counterterrorism Tactics: A Model of Cell Dynamics”

Suggested Track Topics

Networks and Networking (Track 2)

Modeling and Simulation (Track 3)

Organizational Issues (Track 5)

Author

ENS. Kathleen Giebel “STUDENT”

Point of Contact

ENS Kathleen Giebel

Organization

Joint Command, Control, Computers, Communication and Intelligence

Navy Postgraduate School

Monterey, CA

Address and Contact Details

584 C Michelson Rd

Monterey, CA 93940

USA

Tel: (831) 233 8876

Email: kagiebel@nps.edu

Table of Contents

Abstract	4
Introduction	5
Definitions	5
Organizational and Open Systems Perspective	6
Applicability of Case Study Method	7
Existing Policy	9
Implications of the Patriot Act	9
The One-Percent Threshold	10
Case Studies	14
Millennial Bombing	14
Brooklyn Bridge Plot	17
Operation Bojinka or Manila Air	19
Phase I – Conception	22
Creating a Terrorist: Analysis of the Individual	22
Origin of Terror Plots	26
Observables for Counterterrorism Specialists	28
Decision to Move Forward with Concept	32
Catalyst for Progression	33
Observables for Counterterrorism Specialists	35
Phase II – Acquire Resources	40
Initial Activities in this Phase	40
Surveillance and Training as Cell Tactics	42
Communication Methods	44
Indicators of Terrorist Activity	45
Transitions in Leadership	48
Observables for Counterterrorism Specialists	48
Decision to Execute	51
Initial Activities in this Phase	51
Observables for Counterterrorism Specialists	53
Phase III – Execution	55
Observables for Counterterrorism Specialists	55
Generalized Model	57
Conception	59
Decision to Move Forward with Concept	60
Acquire Resources	61
Decision to Execute	62
Execution	63
Conclusion	64
Works Cited	68

Tables of Figures

Figure 1: Layer of Terror Cells	37
Figure 2: Generalized Model	58

Abstract

Terrorist organizations continue to receive significant attention in academic, policy and operational circles. *Modus operandi* of various terrorist organizations have been studied extensively, and extensive databases, such as ITERATE, collate details about terrorist attacks, to include the types of technology used by the terrorist organization and the number of resultant casualties. Surprisingly, however, a generalized model of how terrorist organizations plan their attacks is unavailable in the extant literature. Drawing from organizational theory, particularly the command and control literature and the case study methods, this paper posits a generalized model of terrorist attack planning. By extending this model into the counterterrorism domain, I then consider how to more optimally detect terrorist attacks.

Introduction

Terrorist organizations continue to receive significant attention in academic, policy and operational circles. *Modus operandi* of various terrorist organizations have been studied extensively, and extensive databases, such as ITERATE, collate details about terrorist attacks, to include the types of technology used by the terrorist organization and the extent of resultant casualties. Surprisingly, however, a generalized model of how terrorist organizations plan their attacks is unavailable in the extant literature. Drawing from organizational theory, particularly the command and control literature, and through synthesis of three case studies, this paper posits a generalized model of terrorist attack planning. By extending this model into the counterterrorism domain, I then consider how to more optimally detect terrorist attacks.

Definitions

Definitions of terrorism have received significant scrutiny and debate, with little resolution (Post, et al., 2002, p. 74). For the purpose of this work, I use a definition developed by the US Department of Justice, which defines terrorism as “the unlawful use of force or violence committed by a group or individual against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.” (Grimmer, 2007) Efforts by representatives of the state to prevent or deter such unlawful uses of force or violence will be classified as counterterrorism. Thus counterterrorism, in this work, includes efforts to stop the formation of cells, stop the planning of events that may lead to terrorist attacks and finally stop the execution of attacks. Other definitions needed for this paper include:

Counterterrorism Specialist – any individual whose occupation is related in any way to executing counterterrorism measures, as defined in the above paragraph. This will include everyone from intelligence analysts all the way down to the street cop of a local township.

Organized Crime – “any group having a corporate structure whose primary objective is to obtain money through illegal activities, often surviving on fear and corruption” (Thomas, Kiser, and Casebeer, 2005, p. 37).

Organizational and Open Systems Perspective

This paper focuses on terrorism at the organizational level in order to examine how the *work* of terrorism is conducted, rather than a societal level that might seek to explain why terrorism comes into existence under particular circumstances. Consistent with emerging trends in the literature (Thomas, Kiser and Casebeer, 2005), this paper views all terrorist organizations with an open systems perspective, recognizing that terrorist organizations both draw from and influence the environments in which they are situated (Thomas, Kiser and Casebeer, 2005, Chapter 11). Through understanding the flow of resources and feedback across the boundary between terrorist organizations and their environments, counterterrorism analysts may be able to more optimally interrupt the work processes upon which terrorist organizations depend for successfully producing terrorist attacks. Creating such an understanding involves answering questions such as:

1. What do terror cells require or prefer within their environment in order to be successful?
2. How can law enforces and surveillance teams detect and destroy these preferences?

3. Are there things that can be placed within an environment in order to assist authorities and continue to deter terror cells?

Applicability of Case Study Method

This work builds theory about terrorist attack planning via comparative case studies (Eisenhardt, 1989; Eisenhardt and Graebner, 2007). Terrorist organizations have been described as complex, adaptive systems (Roberts, 2003), responding to changes in their environment. However, any functional terrorist group or cell must operate within the confines of their environment and resources; as such, the feasible space of their actions and behaviors is bounded, and selection of tactics is limited. Thus one advantage of the case study method is that since these cells act independently, any correlation or consistency one finds between how groups conceive, plan, resource, and execute their operations suggests that social or environmental factors, not shared leadership, is primarily responsible for discernible. By abstracting past attempts at terrorist attacks, a generalized model of terrorist attack planning will emerge. This generalized model, in turn, will assist counterterrorism professionals with developing or enhance tactics to interdict future terrorist attacks.

The growing concern among counterterrorism specialists is the presence of homegrown terror cells. “[There] was a shift from an Al Qaeda operational model based on an ‘all-star team’ of operatives that was selected, trained and dispatched by the central leadership to the target, to an operational model that encourages independent “grassroots” *ihadists* to conduct attacks, or to a model in which Al Qaeda provides operational commanders who organize grassroots cells. We refer to this shift as devolution because what we are seeing now is essentially a return to the pre-9/11 model.” (Burton, 2007) I analyze certain terror cells throughout the last decade whose plots have been stopped prior to execution in hopes of finding commonalities between cells. One

restriction that I placed on the selection process of cells chosen, due to time constraints, is that some member of the cell had to be prosecuted in an open court thus making documents open to public record and unclassified in nature. I chose two before the Patriot Act and the remainder after the Act in hopes of identifying any obvious environmental changes simply due to the presence of more regulatory restrictions. The goal was to choose a variety of different cells in hopes that any trends observed will not be dependent on the type of cell or plot attempted.

With that in mind this work conducts primary research into the following three thwarted terrorist attacks: Brooklyn Bridge attack by Iyman Faris, the Millennial Bombings at the Los Angeles Airport and Operation Bojinka a plan in the mid-90's to attack airliners over the Pacific Ocean along with a series of simultaneous attacks around the world. Occasionally, I will make reference to other thwarted terrorist attacks however primary research will be placed on the terror plots outlined above. Directly stated this paper using case studies of thwarted attacks as a primary source material, will investigate if a basic model of terrorism action will emerge that can assist in developing or enhancing US counterterrorism tactics?

Existing Policy

This chapter will be brief, but its intent is to provide the reader with some insight as to what U.S. counterterrorism specialists have as resources and assets in their fight against terror. It will also briefly discuss the range of responses that counterterrorism authorities have when responding to threats, for example what biases and opinions they might have when presented with a given scenario. According to the Uniting Against Terrorism Conference, the broad solution to combating terrorism is presented in a compact list presented below:

- Denying access to financial support
- Denying access to weapons
- Denying access to recruits and communications by stopping internet use
- Denying access to terrorist travel
- Denying access to terrorist intended targets

Implications of the Patriot Act

The most significant change to counterterrorism measures took place under the implementation of the US Patriot Act. The Patriot Act was put in place in direct response to the attacks that took place on September 11, 2001.

The institution of this act increased surveillance of communications within and outside the US. However, provisions allowed via the Patriot Act are very specific in terminology to ensure civil liberties are not infringed. In doing so, the Patriot Act allows authorities a “narrowly defined process” to have electronic surveillance in serious cases such that it can trace the source and destination of calls and other forms of communication but only allows identity of participants to be revealed, nothing more. Additionally the Patriot Act eased restrictions on surveillance of communications (any method) and foreign intelligences outside the US along with giving increased funding to the FBI for surveillance purposes.

One thing the US quickly discovered after the attacks on September 11th as a very successful tool in combating terrorism was the tracking of financial transactions. As such, the Patriot Act enacted policies to combat corruption of financial institutions and to prevent money laundering. Another major concern prior to the September 11th attacks but brought to new heightened attention is border control. There were a number of changes that the Patriot Act put in place in response to this security hole. First it restricts border access to close access to foreign terrorists. It also heightens border control to detain and remove terrorists and to prevent alien terrorists from entering the US, specifically from Canada. Finally, it made it easier to capture and deport those caught.

Additionally the Patriot Act encourages the cooperation and communication of intelligence and law enforcement agencies within the US government. One step towards that end was the creation of the Department of Homeland Security. In the hope of encouraging information flow to increase, this act increased awards to those who assist in information assisting with terrorist cases while also authorizing “sneak and peek” search warrants along with permitting nationwide and perhaps worldwide execution of warrants in terrorism cases. Finally it lengthens the statute of limitations applicable to crimes of terrorism to give counterterrorism authorities extra time to create a case against suspected criminals.

The One-Percent Threshold

The institution of the Patriot Act has resulted in many changes within US agencies with intelligence surveillance functions. One coincidental change that should be at least briefly discussed is the recent institution of something called the 1% doctrine, a term coined by Vice President of the United States, Dick Cheney. In response to activities on September 11, 2001 our current Vice President, enacted what would later become known as the 1% doctrine. This

doctrine follows that if there is even a 1% chance of an attack when presented with intelligences we are to treat it as if the intelligence was true and imminent especially in the case of WMD. The 1% doctrine has made the world of intelligence gathering and reactions to that intelligence an entirely new reality. The CIA and its counterparts are in constant search for information that may or may not be there and they are under constant pressure to have that information yesterday.

According to Suskind's book *The One Percent Doctrine*, the first question these communities are asked when searching out intelligences, is what exactly are they looking for? A question not so easily answered. But then one must follow that query up with how will one track whatever it is that one is looking for, a more daunting task than the previous. Based on this new doctrine, when these communities happen to find anything at all, no matter its significance or validity, if there is but a one percent chance that the information is true or imminent the information is to be treated as certain.

In response to the submission of such a finding, the information is to be forwarded on to the FBI or some sort of local terrorism task force for the larger cities if that intelligence is targeting a risk within the United States. The problem is that the FBI is designed as a justice system for the US Federal Government, as such it does not process information at a fast pace. Everything that is submitted is treated as something that may have to be used later in a court of law. As a result, the FBI is now overloaded with information that by its very nature it tries to track and file away. They can barely get through the first page of one report before seven more come in from a myriad of other intelligence communities.

Thus it is easy to see that a drawback to this type of policy is that it creates an environment that places an enormous amount of pressure and responsibility on intelligence and law enforcement communities to find information before its too late. That responsibility goes

both ways, so when they act on information that is incorrect it wastes time and resources while undermining any credibility that agency has. However, if they were to respond differently and wait for indisputable proof it might be too late and the attack will have already taken place by the time they can respond. Conversely, the benefits to this policy are that it provides response to the slightest divergence from the normal thus ensuring that the probability of discovering a terror plot is greatly increased from the alternative, a 99% percent doctrine.

Directly after events on September 11th, the United States was able to use certain tracking technologies to trace email, cell phone calls and money trails to locate members of Al Qaeda and other terror cells that might have presented a threat to the United States. However, over time these terror networks have adapted and changed to combat ways that were previously effective in targeting them. Since events on 9-11 there has been a shift in who we are looking for; prior to 9-11 we had terrorists entering the United States attempting to attack landmarks. However, today a rising concern is the possibilities of homegrown, self-directed terror cells, having actual US citizens plotting against their own government which is considerably harder to track. Terrorist organizations are now looking for local defectors so that the terrorists do not need fake identification. Additionally, terror networks are attempting to not use technology that is traceable such as cell phones and email. The threat of homegrown terror cells also makes it more difficult to follow the financing of terror plots since many of these cells are becoming self-financed.

As we move forward in our pursuit of terror cells within and outside the United States we are confronted with a few major obstacles. The director of the FBI said it best, “We don’t know what we don’t know” (Klaidman, 2003). Although our intelligence communities are able to bring in information, parse it and send it back out at incredible speeds other agencies like the FBI are not set up as efficiently and thus there is delay in response time. There needs to be more

direction in what exactly counterterrorism authorities are looking for, the next few chapters take a look at this proposition.

Case Studies

This section will explain each case study and its contribution to the more generalized model towards the end of this paper.

Millennial Bombing

The attempted attack on the Los Angeles airport in 1999 was primarily carried out by Ahmad Ressam. He first became interested in jihad while a member of a poor Muslim robbery gang in Montreal Canada. He had come to Canada with a fake French passport and a request for political asylum based on an untrue story in 1994. This group would often steal identifications, luggage, money and sometimes computers from tourists and exchange them with a man named Mokhtar Haouari for money. (Ollen, July 5 2001, p. 588). Haouari was involved in bank fraud and false identification laundering. In the summer of 1997, many of Ressam's friends attended an Afghani training camp to become Muslim jihads; by March of 1998 Ressam was also traveling to an Afghani training camp by way of Pakistan to train. (Ollen, July 3 2001, p. 536-41 544-6).

In Afghanistan Ressam was organized by ethnicity, all Algerians were to train in a group that would be further broken into functioning cells; the leader of Ressam's cell was Abu Doha. (Ollen, July 3 2001, p. 549). When scoping a target, he was taught:

1. Look like a tourist;
 2. Spend much time surveying your site;
 3. When working in a cell preserve your secrets, everyone operates on a need to know basis; and
 4. If speaking on a phone talk normally and controlled or speak in another language.
- (Ollen, July 3 2001, p. 551-2).

He was also taught general tactical training, marksmanship and bomb manufacturing. Ressam's cell designed a plot to attack an airport in California. They would separately travel to Canada by

way of Pakistan, meet up in Montreal, fund their plot through robbery and theft and when ready, travel into California to execute their plot. (Ollen, July 3, 2001, p. 553-4).

Ressam was the only man who was able to make it back into Canada after their training (through false stories for requesting asylum), the rest of his cell was detained in Europe. Ressam was actually being tracked by immigration while in Canada but was not apprehended in time. Despite this set back, Ressam decided with Doha that he was still going to complete the planning of this attack. On his flight back to Canada he brought Hexamine tablets and liquid glycol, a notebook with bomb-making instructions and \$12,000 cash. This cash was to be used to buy a house and purchase weapons. (Ollen, July 3 2001, p. 559-60).

In Montreal, Ressam met back up with Haouari and continued participating in burglary and credit card fraud which would be used to fund his plot. Furthermore, Ressam obtained a Visa through false employment at mutual friend's business. In the summer of 1999 Ressam began active planning of his plot, if he would speak to Doha or Haouari it was usually in Arabic. Doha, located in London, talked to Ressam via a pre-paid cell phone plan to discuss details. The first step was to ensure that all of Ressam's false identification and papers were in order. He started researching locations to purchase explosive chemicals. He also purchased a map of the United States, putting three circles around California airports. (Ollen, July 3, 2001, p. 572-3).

By August of 1999 Ressam decided the plot would consist of loading a bomb into a suitcase, leaving it unaccompanied in the Los Angeles airport with the bomb detonating on a predetermined timing device. The location would be chosen by leaving an empty suitcase in different locations to see where it would draw the least amount of attention. By September, Ressam bought his electronic components that would be needed for the bomb such as electronic circuits and the timing device. In November he was making frequent trips to Vancouver where

he would stay with friend, Abdelmajid Dahoumane while he bought unsuspecting amounts of urea and aluminum sulfate from garden shops which are highly explosive fertilizers. November was also when Ressam informed Haouari about “business” in the United States and asked for financial support, which Haouari complied by using money from his store. He and Haouari also spoke about previous plots that were conducted in France and agreed that similar attacks should take place again. (Ollen, July 5, 2001, p. 589). Haouari was also prepared to introduce Ressam to a friend in New York, Abdelghani Meskini that would assist Ressam with his plan. Ressam only agreed if Meskini was not known to work in Islamic movements. (Ollen, July 3, 2001, p. 574-8).

On November 17, 1999 Ressam left by airplane for Vancouver with his fake license, \$3000 Canadian from Haouari, approximately \$5000 of his own money and the timing devices to purchase the last amounts of the explosive materials he would need for his bomb. (Ollen, July 3, 2001, p. 584). He spent two weeks in Vancouver preparing the explosives with chemical instruments and stealing nitric and sulfuric acid (with the help of Dahoumane) from a fertilizer manufacture before heading back to Montreal one last time. (Ollen, July 5, 2001, p. 592-4). Between the times that Ressam left Vancouver and ultimately headed for the US border he had a flurry of phone calls to Haouari, Meskini and others to organize last minute details for the plot and post-plot operations. Secretive phone calls would be done over pay phone with a phone card; all other calls were simply completed on his cell phone. December 6, 1999 Ressam flew to Vancouver, staying at a local hotel he and Dahoumane assembled the bombs. The morning of December 14, 1999 Ressam had his cell phone, cash and passport (with pages stamped by Afghanistan ripped out) in rented a car that he had loaded the bombs into the trunk the evening before and took the ferry from Victoria to Port Angeles. Ressam was stopped at customs and asked what he was doing, Ressam’s little English and slowed response raised the guard’s

suspicious. When they began to search his car, Ressam got nervous and tried to flee but was apprehended before getting away. It should be noted that although this plot was primarily created and executed by Ahmed Ressam, he was given assistance at least three to four other people not mentioned in court documents. (Ollen, July 5, 2001, p. 603-7, 613).

This plot is an ideal case to study due to the large amount of information about each stage of the planning. It has an airport as a target which is common of today's targets; commercial aviation, airports and large public spaces have long been significant targets for terrorist groups (Security Alert, 2003). Additionally, this plan was organized and produced outside the US and then moved inside the US borders with the execution date approaching, another significant concern of counterterrorism specialists, particularly when those cell members are coming across one of our two adjacent borders: Canada or Mexico. A final interesting factor in this particular plot is the fact that the majority of this plot was planned and executed by one man: Ahmed Ressam.

Brooklyn Bridge Plot

The second plot that will be analyzed is the attempt to destroy the Brooklyn Bridge by Iyman Faris. The Brooklyn Bridge plot was already conceived by top members of Al Qaeda leadership including Khalid Shaikh Mohammed and Majid Khan but was placed upon an independent member, Faris, to research its validity. Faris, a naturalized citizen of the US and a relative of Majid Khan, traveled to Afghanistan by way of Pakistan with and was tasked by top operatives of Al Qaeda leadership to return to the US to see if it was possible to use certain tools to derail a train while simultaneously destroying the Brooklyn Bridge. Before officially working on this project, operatives gave him menial tasks to complete while he waited in Pakistan; he was tasked with getting extensions on airplane tickets which he completed by disguising himself as a

Muslim Missionary and to deliver a bag of money and cell phones to an assigned recipient. (Sinclair, 2003, p. 1-2). By April 2002, Faris was back in the US; there he conducted independent research to discover ways to carry out this plan. He was instructed to use the word *gas stations* for the metal cutters that would bring the bridge down and *mechanic shops* for tools needed to derail the train. He was also instructed to never check his email directly after signing onto the internet, always check at least one other site first. After conducting research on the internet for *metal cutters*, Faris approached an acquaintance that he knew to have some experience with these tools and asked for further information. Between April 2002 and March 2003, Faris struggled to locate information on the two tools he was looking for and sent several coded messages back to Khan in Pakistan relaying that he was still searching. After researching and observing the bridge as a potential target for over a year Faris sent a message back to Khan saying *the weather is too hot*, conveying that the plot would be unlikely to succeed due to the securities and surveillance associated with the target (Sinclair, 2003, p. 3). Through physical and electronic surveillance, counterterrorism authorities became suspicious and Faris was apprehended for conspiring with a known terrorist organization (Donald Rumsfeld, 2004).

This plot is chosen in particular because it was planned after the attacks on September 11th as such also planned with the Patriot Act in place. Although this plot never left the researching phase, it did show a significant amount of communication between cell members and Al Qaeda hierarchy which is not necessarily as prevalent in other plots. It also shows how trust between members is developed; Faris had never met anyone in Al Qaeda leadership but due to his relationship to Khan was able to work with the organization. By having so much communication and developing relationships present in this plot, methods are able to be analyzed for patterns.

Operation Bojinka or Manila Air

Finally, Operation Bojinka was a plot financed by the infamous Al Qaeda leaders Osama Bin Laden and Khalid Shaikh Mohammed (KSM) and masterminded by Mohammed's nephew Ramzi Ahmed Yousef. It was a compilation of many different plots all brought together under all encompassing plan called Operation Bojinka. This plot targeted twelve US-bound airliners with a majority of those flights destined for large cities in the United States in which bombs would be placed under seats near the fuselage that would detonate in flight. Additionally, one of those planes would possibly be used to crash into a strategic US target like the CIA or FBI buildings. (Department of Transportation, 2005). Simultaneously there would be an attack on the US Embassy in Manila and a subsequent assassination of the Pope who would be visiting Manila at the same time. Yousef originally came to the US in 1992 requesting asylum as an Iraqi dissident. Only five months later he executed the first World Trade Center Bombing while working with a cell in New York. By August of 1994 Yousef traveled to Manila in the Philippines to begin the planning of this operation. (Department of Transportation, 1999).

Yousef's cell in Manila consisted of childhood friend Abdul Murad and a third man named Wali Khan Amin Shah. Investigation of the laptop recovered after the plots discovery suggested that there were at least five members to this cell, however the three listed above are the only known conspirators to date (Department of Transportation, 1999). The cell worked out of an apartment located near the US Embassy, Manila; these three tenants were very suspicious and were reported to often have chemical burns on their hands. During their preparation for this flight, "Yousef compiled detailed flight data on the twelve aircraft, including their departing times, flight numbers, flight durations and aircraft types, and transferred this information to his laptop computer. In early November 1994, Yousef placed a large order for chemicals and

equipment in Manila, and, during the next two months, he and his co-conspirators performed several tests in preparation for the aircraft bombings. On December 1, 1994, Yousef and Shah conducted a test by placing a bomb under a patron's seat at the Greenbelt movie theater in Manila. At 10: 30 p.m., the bomb exploded, injuring several people” (Kelley, 2003). Directly after this explosion Shah left the Philippines to travel in the Middle East and then returned a few weeks later under an assumed name.

This plot reached a test execution phase by December 11, 1994 when Yousef tested airport security by bringing a bomb 1/10 the planned size. He assembled it on board Philippine Airlines Flight 424 from Manila to Tokyo, assembling it in the bathroom and then placing it under a seat where it would detonate. Yousef deplaned in the Philippine City of Cebu and the bomb ultimately detonated on its way to Tokyo. This bomb was not designed to destroy the plane, only test whether such an operation was feasible, Yousef had accomplished that goal. (Department of Transportation, 1999).

This plot was uncovered by Philippine officials when there was a chemical fire in the apartment being rented and officials recovered many of the bomb making supplies located within. “Homemade explosives, batteries, timers, electronic components, and a notebook full of instructions for building bombs were discovered. Subsequent investigation of computer files taken from the apartment revealed the plan in which five terrorists were to have placed explosive devices aboard United, Northwest, and Delta airline flights. In each case, a similar technique was to be used. A terrorist would fly the first leg of a flight out of a city in East Asia, plant the device aboard the aircraft and then get off at an intermediate stop. The explosive device would then destroy the aircraft as it continued on the subsequent leg of the flight to the United States” (Department of Transportation, 1999). This is also where the Philippine officials discovered

evidence that this cell was likely being funded by Osama Bin Laden's brother-in-law, Mohammed Jamil Khalifa since "police retrieved Khalifa's business card from the ruins" (Sanchez, 2004).

The reason this paper uses Operation Bojinka is primarily due to the sheer size of this plan, this plot was a huge undertaking by the Manila cell. It exemplifies a typical Al Qaeda plan which is generally quite elaborate being made up of many different pieces all working together with detailed planning and coordination, as well as an extensive pre-execution rehearsal and testing. This also creates a situation that provides for large amounts of observable evidence. As stated above, it uses an airplane crash as part of the plot which is also ideal since today's larger plots are including scenarios very similar to part of Operation Bojinka's objectives. Additionally it was planned and designed before the attacks on September 11, 2001 and the introduction of the Patriot Act. Some schools of thought suggest that since Al Qaeda's hierarchy has now been disrupted and its leadership driven underground, that the terror cells of today have actually reverted back to pre-September 11th style planning. That is, broad based guidelines by Al Qaeda leadership with command structure and specific details left to individual cells, making it extremely beneficial to also study these types of scenarios. (Burton, 2007) .

Phase I – Conception

To truly analyze the environment of plot from beginning to end, one must begin with the question of where do terror cells originate? The subsequent paragraphs do not claim that terror cells will derive from the following criteria, however it does submit that such variables are often present in situations where such cells can and have existed. “A given ethnicity in a country that is also poor, politically disenfranchised, and has a unique religion is far more likely to be the basis or source for a VNSA [Violent Non-State Actor] than a pre-existing identity cleavage” (Thomas, Kiser and Casebeer, 2005, 86).

Creating a Terrorist: Analysis of the Individual

Although a majority of individuals that make up a cell are usually male ranging in age from 18 to 37, this can not be a definitive profile. John Holschen, Regional Manager of Triple Canopy, reaffirmed this statement in his presentation at the 2007 Trexpo West Conference located in Long Beach, California saying “You can not base terror profiles on ethnicity”. Usually terrorists are created from two sources: either the individual has family that is already involved terrorist activity or the individual is a convert who has different backgrounds but share a similar ideology (Thomas, Kiser and Casebeer, 2005). Individuals that are young are still developing their belief base and thus are quite impressionable and will likely not have a family or responsibilities that may deter them from giving their life to a cause. Cells that form will often be centered on the same social meeting place. This was seen in “1999 when many of al-Masri's associates, including his son, were arrested in Yemen in connection with bomb attacks staged by militant Islamist group the Aden-Abyan Islamic Army along with another group, Supporters of Shariah” (Londonistan, 2005). “The mosque has served as a rendezvous point for Al Qaeda

handlers/feelers and potential local operatives. Once an Al Qaeda manager has made first contact, further meetings are held only in private, to reduce the risk of detection. But the mosque has in the past offered the network ideologically indoctrinated British recruits” (Londonistan, 2005) “major influence was the social environment of the youth” (Denny, Post, Sprinzak, 2003) if a child has grown up in a community that sympathizes terrorist exploits, that individual is more likely to follow the same pursuits in later years.

“Several organizational processes are necessary for a group survival and growth – recruitment, screening, socialization, training, assignment and promotion, and attrition” (Post et al., 2002, p. 90). Each of these processes, although necessary for overall group survival are not all required during *Plot Conception*, each will be discussed at different locations through this paper. However it is important realize that as a cell progresses through *plot conception* to *execution* a counterterrorism specialist will want to be looking for these types of processes.

The first step in creating a plot is to establish a cell, thus an individual who wishes to execute terrorist activity will want to recruit help. He will do that by gaining interest of a group of individuals and then establishing “acceptable versus unacceptable members” (Post et al., 2002, p. 90). Interest would be generated by “exploiting identity and mobilizing the individual along similar lines, either by creating competing identities where none previously existed or exacerbating existing identity differences, is an important aspect of the individual’s conversion from citizen to VNSA [Violent Non-State Actor] member” (Thomas, Kiser and Casebeer, 2005, p. 63). If there is an individual creating fissures in a community this will only expedite the process to converting citizens to violent non-state actors. There may be a group of scattered individuals that either loosely meet via internet, meetings or publications that share a certain ideology; however when this group meets any ideas that are shared only become magnified and

so themes of violence or revenge that may be subtle to an individual would no longer be true in the presence of the group. An additional risk becomes present when there is an agitator present as discussed in the previous quote (Post et al., 2002, p. 89). The four members of the 9-11 conspirators that were located in Hamburg for a short period were known to be in a group that spoke about Anti-American sentiments. “By the time Atta, Shehhi, and Binalshibh were living together in Hamburg, they and Jarrah were well known among Muslims in Hamburg and, with a few other like-minded students, were holding extremely anti-American discussions.... As time passed, the group became more extreme and secretive. According to Binalshibh, by sometime in 1999, the four had decided to act on their beliefs and to pursue jihad against the Russians in Chechnya” (National Commission, 2004, p. 3-4).

Post (2002, p. 106) claims that if “the literature and communications of a community of belief shift into advocacy of violence against certain targets” then this is a strong indicator that this group is shifting from a discussion forum to a source that could eventually become a terror cell. Example of this type transformation is Timothy McVeigh, responsible for the bombing of Alfred P. Murrah Federal Building in Oklahoma City, “he was not a formal member of any of the militia organizations or other right-wing groups whose ideology he espoused and acted on” (Post, 2002, p. 89).

Another indicator that a group may be shifting to violent extremism is a change in recruitment process or recruitment of a certain type of individual. “Groups that recruit from pools including violent, disgruntled, disenfranchised, victimized, or radicalized personnel, such as the Lautaro Youth Movement in Chile, or the recruitment of unemployed disgruntled youth in the Gaza strip, or personnel with specialized training or experience suitable to violence are more likely to pursue violence and terrorism” (Post et al., 2002, p. 90-91). When a counterterrorism

specialist is trying to determine whether a terror network may be recruiting in their area, things to take note of:

1. Individuals with a history of legal conflicts with government or criminal actions;
 2. Individuals that demonstrate a history of violent behavior or experience with weapons, including participation in military training, paramilitary or other violent organizations, or violent campaigns; and
 3. Individuals with special educational background (e.g. microbiology), or specialized skills (e.g. explosives).
- (p. 91).

Once a group has been discovered as actively recruiting, another indicator would be to look at how selective they are being in their recruiting. “Groups who are a risk for terrorism are more likely to select and screen more selectively” (Post, et al., 2002, p. 91). One would also want to be mindful of groups that stress such values as “obedience to authority, absolute loyalty to the group and leader and the need for sacrifice” (Post, et al., 2002, p. 91). Conversely, while a group is screening individuals there will be members coming and also members leaving for any variety of reasons. A few reasons why a member would leave could include disagreement with the new group direction, difficulty to adhere to the strict roles within the group, or a member is executed or expelled from the group for questionable loyalty or security. Sudden losses to an organization could indicate this heightened screening process or an increased seriousness to the goals of the group which could be indicative of terrorist activity. (Post et al., 2002, p. 93).

As seen many times in the case studies presented above, trust is a major issue within this lifecycle. Javier Jordan (2005) even ventures “in general, Jihadi’s are reluctant to trust converts” (p. 179). If a terrorist knew someone or a person was suggested to them by a friend, they would be much more likely to work that individual. In the LAX plot Ressam agreed to work with Meskini because of a suggestion by Haouari, a person that Ressam trusted very much. A large portion of the questioning in Ressam’s cross-examination in Haouari’s case dealt with this fact.

(Ollen, July 5 2001). Likewise in the Brooklyn Bridge case, Iyman Faris was introduced to Osama Bin Laden and Khalid Shaikh Mohammed because of his relationship with Majid Khan. However, Faris was required to perform certain tasks like order sleeping bags with Majid, transport money and cell phones to a given destination and transfer airplane tickets at a local travel agency in order to prove his loyalties. Finally, Yousef asked his friend Murad to help with his plot to destroy American-bound airliners because they had been friends since childhood. Thus it can be surmised that previous relationships and trust are quite crucial to these types of operations.

Origin of Terror Plots

Now that a source of divergence towards violence extremism is established the next step is to analyze where terror cells establish the ideas that will one day lead to plots against innocents. One must recognize that ideas exist because of the environment is conducive to their existence and proliferation. “Support (at least passive and ideally active) of the population in which a terrorist organization lives is, except in unusual cases, a practical necessity for the organizations survival” (Thomas, Kiser and Casebeer, 2005, p. 81). Ideas are supported because a strong belief is sponsored. In general religious extremism is supported by local family and community members (Denny, Post, Sprinzak, 2003).

In terms of a timeline for *plot conception* the Millennial Bombing was conceived over a five to six months, Ressay and other cell members were brainstorming at the Afghani training camps from approximately March to December of 1998 during discussions with Ressay’s Algerian cell. As such, this plot is an example of a bottom-up idea. Since they were training in Afghanistan at the time of the plot conception the cell members found themselves in an environment that not only promoted Islamic extremism; it actually taught individuals how to be

successful at it. Towards the end of their training this cell discussed moving forward with one of the ideas they had discussed: an attack on a US airport by using a bomb.

The timeline for the attempt to destroy the Brooklyn Bridge is unknown due to the source of this plot. This plot is an example of a top-down creation; the plot had already been conceived by higher ranking members of Al Qaeda and Iyman was tasked with finding its validity. Thus this plan, at the time when this case study begins has already moved past conception and into the decision to acquire resources and information on the target.

Operation Bojinka is a top-down plot that was conceived by Ahmed Yousef over a period of approximately one year; the ambiguity lies in the fact that the first World Trade Center bombing took place in later 1992 and Yousef was flying to the Philippines by August 1994. Somewhere in that timeframe there was a plot conception and a decision (at the very least) by Yousef to move it to the next phase of *acquiring resources*. Conception of this plot was formulated based on a series of other attempted plots all pulled together under one plan; this type of plot is very familiar to terrorist groups like Al Qaeda. There has been speculation that the idea to crash a plane into a known US landmark was from Frank Eugene Corder who failed to crash his Cessna into the White House only four days before planning began on Operation Bojinka. Additionally, these terror cells are known for thinking big, with many things happening simultaneously. Fred Burton, author of many Stratfor publications states that Al Qaeda is “capable of keeping several plots in motion simultaneously and of adapting to new security considerations on the fly, at least while the core communications and logistics network remained intact” (2007). History generally repeats itself, and terrorism brainstorming will be no different. Cells will use past events as inspiration for future plots. Al Qaeda is especially known for using previously successful plans again and again with slight variations on a theme (Burton, 2007).

Homegrown terror cells will be no different; many of them will be looking to the past for inspiration on future attacks.

One fact to take notice of is that during the initial conception of a plot there will not be as many people involved when compared to later stages of plot development. For the Millennial Bombing brainstorming began in the Algerian Cell that had been formed at the training camp in Afghanistan. Each cell that was formed in Afghanistan had a leader as well. This man was in charge of providing direction for the cell and approving ideas that the cell may have created. The leader of this particular group in Afghanistan was Abu Doha. Although there are no specifics available on who specifically designed this plot, it is known that it was some section of Al Qaeda hierarchy which would be an inherently small group. Not as much information is documented about the origins of Operation Bojinka, but it is believed to have been masterminded by Ramzi Yousef relative of Khalid Shaikh Mohammed. In this plot, once the plan was finalized it was all placed onto a laptop for safe keeping.

Observables for Counterterrorism Specialists

From these three cases, observables for which counterterrorism personnel focus on primarily are that terrorist's tend to recruit and plan in areas where they feel comfortable and safe, especially if that area has community members supporting their ideas such as areas where social conformity is very high. Counterterrorism personnel will need to be mindful of areas where terror cells or sympathizers have been located before or where known groups of extreme ideologies reside, monitoring for a transformation from discussions to possibilities of using violence as a solution to a means is strong risk indicator for those groups.

“Moderation frequently has been the element that has made the difference between success and failure for Al Qaeda operations” (Burton, April 16, 2006). The goal behind

organizing and executing terrorist activity is to achieve a level of fear among their targets, thus terror cells will want to make a statement, and so the probability of going big is higher (Burton, April 16, 2006). This is ideal for counterterrorism specialists since they can use this fact to their advantage. “With every person who is brought in on a secret, the risks of detection or infiltration of a cell increase. Given the large number of arrests that have been made in the U.K. case, and the fact that authorities believe as many as 50 people perhaps were involved in the plot, it is not surprising that operational security was compromised” (Burton, April 16, 2006). Also with an expected increase in homegrown terrorism there will not be the same precision and experience of having Al Qaeda leaders providing guidance and lessons learned.

In all three cases there was always a leader guiding the discussion. “An effective identity entrepreneur can create identity where none exists, or can magnify identity in such a manner as to create nostalgia for a greatness or stature that may have never existed, or can manipulate or distort identity to a point of convincing his audience that their identity is synonymous with victimhood, injustice, and discrimination” (Thomas, Kiser and Casebeer, 2005, 86). Within cells in the US tracked thus far this leader is generally a recruiter as seen in the Virginia Jihad Group and the Portland Seven (McNulty, 2006). Thus they have been trained to gain the trust of members so that members will brainstorm openly.

Given all this ambiguity there is one encouraging aspect to this phase, a plot in its infancy of conception generally has a single point of failure especially for homegrown terror cells that are not directly connected with a terrorist organization. This is because for a homegrown terror cell there is usually one person (or at least a minimal number of people) guiding the discussion at this phase. The final cell that will execute the plot has not been created and members have not bought into the idea yet. So the leader of this group, usually a leader within a mosque or religious

center will hold offsite meetings to brainstorm and encourage members to commit themselves to furthering Islam.

“A change in the pattern of the radicalization process and that those responsible for the change are taking extra precautions, including appearance in limited circles in marginalized Islamic activity or Islamic centers such as: home gatherings, country clubs, libraries, and schools. This pattern of activity is quite difficult to detect when dealing with a limited cell, although it is evident that the leader of a terror cell will search for his potential recruits in this type of environment” (Azani, 2006).

These cells are aware that they are being watched and as such are taking the extra precautions necessary to ensure that they are successful.

With the increased concern of homegrown terrorism observables to identify a terrorist cell being formed (in addition to risk factors detailed above) could include the fact these cells are now require self-financing. According to authors of Warlords Rising, terrorist “almost always raise funds through illegal means” (Thomas, Kiser and Casebeer, 2005, p. 83). Illegal means are the easiest way to do this. For example “it has been established that the attacks” carried out in Madrid Spain in 2004 “were financed largely by money from drugs trafficking in North Morocco” (Jordan, 2005, p. 175). In the Millennial Bombing, Ressaym’s cell was a group of poor Algerian robbers who worked for a man to steal from the tourists of Montreal. Additionally in Los Angeles there was a raid of car burglary fraud that was discovered to be financing Chechen Terrorist activity in the Republic of Georgia (Block, 2007). “This case was a breakthrough in that what we found didn’t look like terrorism: it looked like regular criminal activity but when we followed it long enough it developed what we believed [was] a nexus to terrorism (Block, 2007). Thus one avenue for success for counterterrorism authorities is to look for areas where increased reports of identification, money or computers are being stolen in a certain area. Ressaym’s cell acquired false identifications to use for their own gain but also stole

identifications, social security numbers, money and computers from tourists so that he could sell these to fund his plot.

Since the war in Afghanistan this next observable fact is not as prevalent but sudden trips to Afghanistan in the past ten years could be an indication that the individual in question might have attended a training camp at one point in time. For example Ressay met his cell at a camp in Afghanistan when he went there to train. Similarly, Faris went to Afghanistan to get details on the bridge plot.

Before the cell can move into the next stage there must be enough discussion that the cell believes that this is a feasible plot; this means that the cell needs to be assured that it has enough support to complete the task. “The type of support a group receives can range from ideological, financial, and material to operational, including weapons, training, logistics, advisors, and troops. A radical group receiving operational support is a greater risk for terrorism than one receiving only ideological and financial support” (Post et al., 2002, p. 95). For each cell, this time frame to reach the point where the cell is comfortable with moving forward with concept is different. In Operation Bojinka Yousef took nearly a year to develop a plot before he contacted childhood friend, Murad, to move to the next stage. Likewise the Brooklyn Bridge plot was created by Al Qaeda hierarchy to form a general plan before consulting any other outside sources. Finally the plan for the Millennial Bombing was thoroughly discussed before it was presented to their leader Abu Doha for approval.

If it is not already apparent, this stage is rather difficult to monitor, since there are not as many players. Furthermore, the cell must wait to move to the next stage until they feel safe that everyone involved in the brainstorming will agree to move forward and that their efforts will be successful.

Decision to Move Forward with Concept

There is considerable more preparation involved with plan conception than with the decision to move forward. This part of the plots progression is generally a meeting or a series of meetings to ensure that everyone has bought in and they can accomplish their task. Sometimes, depending on the Command and Control structure of a cell the decision will not even be yours to make, but rather the approval of someone higher up in leadership.

For the Millennial Plot, at some point while they were in Afghanistan training, the cell finished their discussions and submitted their plot for review by the cell leader, Abu Doha. Doha approved their idea to attack an airport in the United States. The specific planning for this plot would commence in Montreal once they had finished with their training. When they left the training camp they were to each travel to Montreal separately and convene at a specific location each bringing on their personage a certain amount of money to initialize their planning. Ressay carried \$25,000 with him into Canada. When no one else in the cell was able to reach Montreal, Ressay through discussion with Doha made the decision to move forward with the plot.

The decision to move forward with the Brooklyn Bridge plot took place within the upper-echelon of Al Qaeda leadership, specifically Majid Khan and KSM in early 2002. However, even though members decided to move forward with the plot, it was agreed that the plan needed further research to see whether or not it was even feasible to complete the attack. So present at this meeting to move forward was Iyman Faris, he would be tasked with providing Al Qaeda with more information on how this attack could take place. As Iyman gathered information he was to inform members in Al Qaeda of his progress through coded language.

Likewise, Operation Bojinka moved to the next phase in August of 1994 by members of leadership within the terrorist hierarchy including KSM and Ramzi Yousef. The plot is thought

to be finalized after Corder's failed attempt to attack the White House with a small airplane in September of 1994. With this last change implemented and funding through Bin Laden and KSM finalized; the brainstorming concluded and active planning began by bringing on more members with expertise in different areas, a cell was formed. One man that was brought into the cell was a childhood friend of Ramzi Yousef named Abdul Hakim Murad also a pilot trained in the United States. All other cell members were told to meet in Manila by a given date to begin planning.

This is a very important part of the terror cells evolutionary progress, during this phase the cell is moving from just an idea to action. According to an official within the FBI, most cells do not move past plot conception. "A lot of these guys lose the jihadi, desert spirit," said the official. "They get families, they get jobs, and they lose the fire in the belly. Welcome to America." (Klaidman, 2003). Many of these cells start because they would like to imagine a place where change and greater things can be a reality. In order to move beyond talking about change to making change they will need to undertake a crucial period of development within a terrorist cell. So what is the major change between talking about horrific ideas to actually performing those actions?

Catalyst for Progression

In order for a cell to move from internally harboring resentment to actively pursuing violent means as a solution to their problems will take an outside catalyst which can come in a variety of forms. There could have been a recent failed or successful terrorist attack. Fred Burton (2007) gives many examples of this type of catalyst. Another cause for the transformation is a charismatic leader or recruiter strongly encouraging the cell to move forward. Recruitment in terms of this paper refers to not only convincing an individual to join in a group but ultimately inciting action that furthers the goals of the organization. In terms of terror cells discovered in

the United States specific people will be brought in to ‘close the deal’ in their recruitment. This type of recruitment relies “heavily on personal appeals tailored specifically for a targeted individual or small group. They often use peers, including relatives, in making the pitch. This strategy effectively leverages the influential power of conformity (peer pressure) and related phenomena... the power of one-on-one persuasive communication is brought to bear at an individual level, and new recruits can be directly manipulated” (Gerwehr and Daly, 2006, p. 83). These individuals would convince the potential new members through rhetorical argument that the only solution to Muslim suffering is actionable violence.

Whatever belief systems or rhetoric these spiritual leaders had at their disposal they would use to convince new members to switch from being sympathetic towards their Muslim brothers in the Middle East and abroad to being outraged at everything that is happening in the world today. As soon as the leaders could get them to this stage it was very easy to move them to the next phase in the cell lifecycle: *decision to move forward with conception*.

Post (2002, p. 105) provides a list of observable indicators of risk associated with a cell that might have a charismatic leader-follower relationship:

1. The group is consumed by a sense of millenarian urgency.
2. The followers uncritically follow the leader’s directive.
3. The group has charismatic characteristics and the leader has a history of violence or believes that violence is necessary in the pursuit of the leader’s goals.

In conclusion some things that counterterrorism authorities should look for in this stage are first and foremost the formation of an operational cell. For example Yousef contacted childhood friend, Murad, to help. Iyman Faris was brought to Afghanistan to be tasked with researching further information an addition to the original cell that conceived the plan.

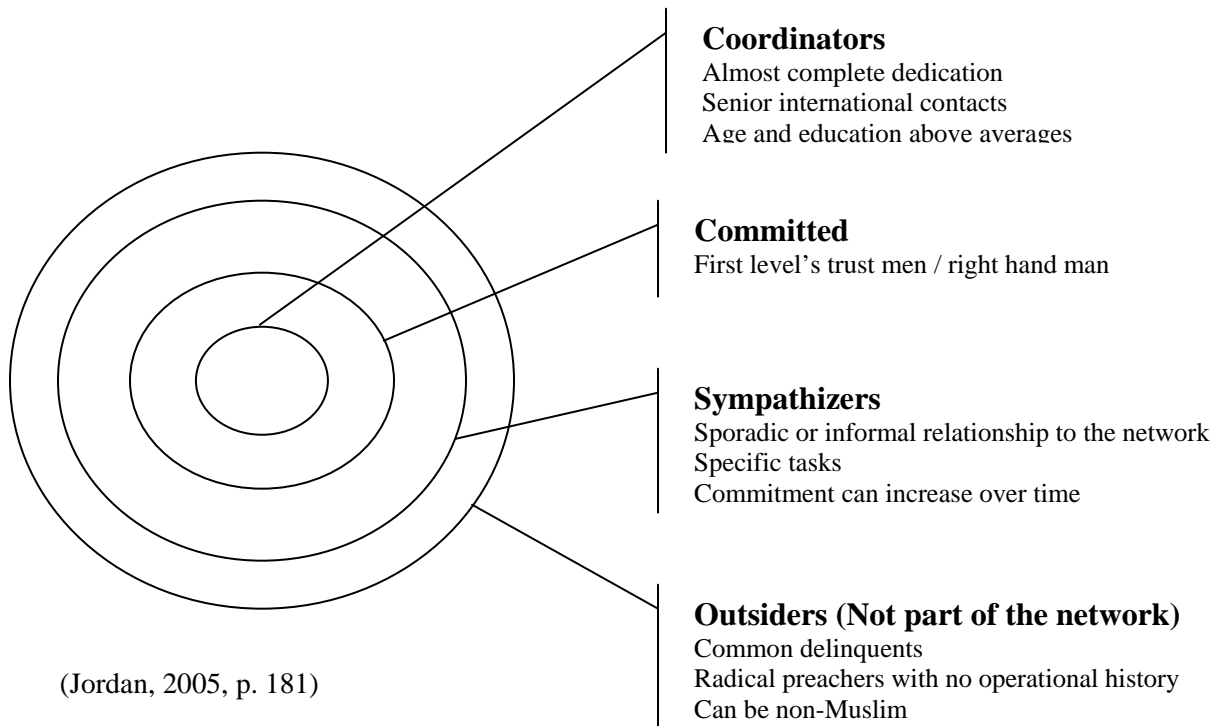
In order for the plan to move from *conception* to *acquiring resources* there needs to be a meeting and, at least in all cases studied in this paper, have taken place in person. That means

that there is a point in the evolutionary cycle of a plot that all parties are present to decide the fate of their idea. The September 11th mastermind, KSM experienced a significant scenario. He met with Osama Bin Laden in 1996 to propose the idea of using airplanes as missiles on targets and although Bin Laden liked the idea he was not convinced to fully support it. By 1999 Bin Laden called KSM back to Afghanistan and told him that his idea would be fully supported by Al Qaeda (National Commission, 2004, p. 2). This meeting takes place in person because it is such a significant step in the evolutionary process; it is the buy-in for everyone.

Observables for Counterterrorism Specialists

A cell will be moving to the next stage once active planning of details within the plot begins. General finances for the plot will be established such that base expenses will be covered and initial research for the plot can begin. This is crucial, a cell can not move forward if they do not have the money. Ramzi Yousef, the mastermind behind the initial World Trade Center Bombing “told his captors that his plan ... might have succeeded if he'd had more funding” (Hirschorn, 2003). In fact, theories suggest that is the reason that Yousef chose to operate in the Philippines after his failed attempt at the World Trade Center – there was more funding in the Philippines. “The success of this financial network created by Bin Laden, intelligence officials believe, was the reason Ramzi Yousef chose to operate a cell in the Philippines. ‘He came here [the Philippines] because of an existing support network and structure,’ Col. Rodolfo Mendoza tells CNN” (Ressa, 2001). Ressa was given \$25,000 before he returned to Canada and Yousef could not fly to Manila before Osama and KSM had approved finances. Like Ressa’s cell, José Padilla also returned to the US from a variety of Middle Eastern countries with a large amount of cash being carried on the plane with him.

Additionally, new members of the cell will be brought in as field experts for certain portions of the plot. This is a very important aspect at this stage since it will be a point of infiltration for counterterrorism specialists. After KSM and Bin Laden had their meeting in 1999 to move forward with the 9-11 plot “Bin Laden quickly provided KSM with four potential suicide operatives” that already had Visas to enter the United States with (National Commission, 2004, p. 2). Javier Jordan describes a diagram that illustrates the layers of a terror cell in terms of circular shells:



(Jordan, 2005, p. 181)

Figure 1: Layer of Terror Cells

With this diagram Jordan describes members of the operational cell (the cell that will execute the plot) as levels three and four in the diagram. Thus this diagram shows the inherent disadvantages for members of terrorist organizations. “An advantage is the enormous difficulty security agencies face in infiltrating the center to obtain quality preventative intelligence and the contents of the international relations of the network. The disadvantage consists in that exterior circles are vulnerable to infiltration and detection. From these circles, it is possible to ascertain who inhabits the inner circles, and these could be arrested” (Jordan, 2005, p. 184). According to Jordan this is the reason the Madrid cell was dismantled (Jordan, 2005, p. 184). This is a definite advantage for counterterrorism specialists since these networks, in order to survive, must keep their exterior open. “They are obliged as a consequence if the tasks they fulfill: propaganda, recruitment, logistical support or terrorist activity preparation” (Jordan, 2005, p. 185) are the base requirements to furthering a terrorist organization. The downside of course being that there is great difficulty in obtaining that initial intelligence in order to make counterterrorism suspect of terror activity.

Although one should be aware that there will most likely be a process by which trust is built whether that be a series of conversations between new members and old, such was the case with Ressam and Meskini in the Millennial Bombing or a series of activities that must be completed like when Faris met with Al Qaeda operatives in Afghanistan. Faris was tasked with ordering sleeping bags, extending tickets and delivering a bag that contained money and cell phones. Each plot had new members brought in at this stage. In Operation Bojinka Yousef's friend was contacted since he was an American airline pilot and such expertise would be needed to take the planes from Manila to the United States. Iyman Faris contacted an associate that he knew to be familiar with cable cutting torches to help him find a way to acquire such tools while still staying in constant communication with his original cell made up of members in Al Qaeda leadership including KSM and Majid Khan. Finally, Ressam used Dahoumane as an assistant in Vancouver to steal explosives and build the bomb later in the process. Ressam also stayed in contact with his original leader from Afghanistan, Abu Doha, as a source of information and false identification.

There were a number of similarities between each of these plots that points to patterns that form during the conception phase of cell formation. First and foremost, the *plot conception* phase is the weakest part of the cell formation. Many cells do not make it past this point, and so if counterterrorism authorities wanted to stop plots, this would be the phase in which to most easily deter progression. This is usually a single point of failure since the largest driving force is the leader. This source of motivation pushes hedging members to be more confident so that they move forward with active planning. The cell is still in its infancy, so individuals are still unsure of themselves and their compatriots. Now is the easiest point in time to infiltrate a suspected terror cell. Planning at this stage also usually takes place in person in a place where cell members

feel safe and secure since there needs to be frequent meetings to brainstorm and ultimately decide on one direction. Finally, although today it might be a moot point, at least within these case studies there were also frequent trips to Afghanistan during this phase for either training (in the case of the Millennial Bomber) or meetings to discuss the plot (in the case of Iyman Faris).

Phase II – Acquire Resources

The next phase in the evolution of a plot is the period spent *acquiring resources* and information on the agreed plan. This is the period of time when exact details are planned and how those details will be enacted is scrutinized. For this phase of planning the individuals involved will need to be relatively close to their target for research purposes; they will also need to be as inconspicuous as possible. However, for counterterrorism authorities this is also the most observable part of the plot since most resources are acquired and those that are not physically obtained are thoroughly researched.

Initial Activities in this Phase

The general timeline for this phase did vary from plot to plot but generally lasted less than one year but at least a few months in duration. For the Millennial Bombing, Ressam began initial resource gathering in early summer of 1999 and concluded around late October making it a total of six months devoted to this phase. Likewise, the 9-11 conspirators were formed in early 1999 and by the fall of that same year were already completing extensive training and research on their target (National Commission, 2004, p. 2). Faris took much more time to reach the same point as Ressam began his research in April of 2002 and concluded in March of 2003. However, Faris also had much more difficulty in acquiring resources for his plot and ultimately concluded that execution would be unsuccessful. Finally, Operation Bojinka found that they could conclude resource acquisition in only three months from September to November of 1994.

In the previous phase, *decision to move forward with conception*, the cell will take on field experts in whatever subject area they may need. These individuals along with the original cell will be the constituents throughout the resource phase as well. However it should be noted

that in Ressam's testimony he told the court that at the training sessions in Afghanistan he was instructed that as part typical cell operations each member of the cell is to keep their portion of the plan a secret from other members (Ollen, July 3 2001, p. 551-2). The only reason to share information is in the event that one cell member is required to collaborate with another for plot execution. Thus the plot will not necessarily have a single point of failure as it did in *plot conception* since members are now acting somewhat independent of one another; it will also not be entirely evident who holds what portion in plot execution. As J. D. Farley (2003, p. 400) stated *Breaking Al Qaeda Cells: A Mathematical Analysis* "It is not enough simply to seek to disconnect terrorist networks. For although doing so may succeed in creating two clusters of terrorists incapable of communicating directly with each other, one of the clusters may yet contain a leader and enough followers to carry out a devastating attack." This statement is verified through plot analysis of the 9-11 conspiracy. KSM's original pilots Hazmi and Mihdhar did not follow through with the original plan whatsoever which was to travel to the US and train to become pilots of commercial airliners. "This failure, however, had little impact on the plot. The setback occurred early enough to permit further adjustment. Al Qaeda's discovery of new operatives—men with English language skills, higher education, exposure to the West, and, in the case of Hani Hanjour, prior flight training—soon remedied the problem" (National Commission, 2004, p. 14).

The acquiring resource phase is multi-faceted and as such will have a variety of activities taking place as it progresses. Within the first few months of the 9-11 conspirators were learning "basic English words and phrases and showed them how to read a phone book, make travel reservations, use the Internet, and encode communications. They also used flight simulator computer games and analyzed airline schedules to figure out flights that would be in the air at the

same time” (National Commission, 2004, p. 2). As Ressam stated in his testimony, the first step in acquiring resources for the plot is to establish an identity (Ollen, July 3 2001, p. 572-3) and a location to work from. This is to ensure fluid movement within the country while also remaining anonymous in action. Ideally they would want to be legal in the country but it is not necessary. Ressam was wanted by immigration while in Montreal working for Haouari, but immigration never found him before he was ready to execute his plot in the United States. Likewise, Iyman Faris had come to the United States under a student visa but never enrolled in a school, a violation of US Student Visa statutes as well. Additionally the cell will establish a base of operation, for Ressam this took place in Montreal and Vancouver; Yousef based his operation out of Manila and Iyman had to return to the United States where he was able to use his truck driving career as mode to travel to his area of research.

Surveillance and Training as Cell Tactics

Once this base has been established the next step is to begin surveillance of the target(s) and to acquire inconspicuous resources. According to Mr. Holschen “Surveillance is where we usually detect terrorists”, he continued to explain that this is where they are most observable and it is the weakest part of their lifecycle. Thus it would be advantageous for counterterrorism specialists to realize that terror cells are forced to survey and so this is an opportune time for these specialists to detect and stop the planning of a plot before it reaches execution. For example Iyman Faris took a detour on his truck route to travel to the Brooklyn Bridge to observe security and surveillance precautions enacted at the site. Furthermore, Yousef and Murad rented an apartment up the street from the US Embassy target in Manila and would also be the route taken by the Pope on his visit to this southeast Asia city. For Ressam, surveillance would not be necessary since in the plot conception he had already concluded that security was lax enough to

provide success for the plot. He would be able to figure out an exact location of his bomb simply through a test execution. Thus counterterrorism authorities should be aware that for soft targets, terror cells may be able to bypass this step entirely since it is not always necessary for their success.

Additionally during this phase members of the cell will want to consult their field experts for information on acquiring certain resources necessary for plot success. In the Millennial Bombing, Ressam contacted an associate on how to acquire a gun with a silencer. Ressam also worked with Dahoumane to obtain highly explosive chemicals in Vancouver and used him as a resource for bomb construction. Iyman consulted an acquaintance for ways to get a hold of something that would cut through the supports to the Brooklyn Bridge.

“Even groups who recruit, select, and socialize former military personnel still must prepare and train for specific operations, with reference to their specific roles and assignments” (Post et al., 2002, p. 92). In the absence of field experts, cell members must use their own means to acquire and learn about a certain subject matter. This is highly beneficial to counterterrorism specialists since lack of expertise often presents a scenario where additional training or as a result accidents are much more likely. “Groups that are more likely to pursue terrorism provide members with training designed to promote military discipline and coordinated group action against opponents. Members must be trained to use weapons, follow directions, and must be prepared for the intensity of violent conflict” (Post et al., 2002, p. 92).

Ressam was not familiar with marksmanship and thus had to acquire a silencer with his gun in order to practice without causing alarm. Yousef and Murad had not worked with explosives before and were forced to create and test such items within the confines of their apartment through the only means they had available: trial and error. Furthermore, Yousef had to

train individuals to assist him with his plan to assassinate the Pope. “While in the Philippines, Yousef traveled to the Abu Sayyaf base in Basilan and trained about 20 members in 1994. A year later, he gathered about 20 men in Matabungkay, near the capital, Manila, and trained them allegedly to help assassinate the Pope” (Ressa, 2001).

This is also seen in recent cells such as the Northern Virginia Jihad Group who tried to train at a local paintball facility. Likewise the Portland Seven practiced target shooting, paramilitary tactics and martial arts at various inconspicuous locations in Oregon. (McNulty, 2006). In the absence of a real training or research facility, cell members are forced to adapt to their environment. As such they will use whatever is available to them such as back-wooded areas that are quiet and undisturbed, or a paintball facility where they train as if they are in a real wartime environment. Knowing this, counterterrorism specialists must look at each situation in an analytical way with counterterrorism always in the back of their minds.

Communication Methods

Communication during the *acquiring resources* phase is frequent in the beginning but as members get further into this phase and begin to transition to the next stage, communication will begin to wane. For Ressam he used a pay phone or a pay-as-you-go cell phone plan to complete all remote conversations with Doha, Meskini or Dahoumane. Additionally, if he was to speak in person with someone he would often use Arabic so that he would not be easily understood by bystanders. In the beginning of the plot he would talk to Doha to work out details on how he (Ressam) was to execute this plot without the entire cell. Once Ressam moved passed those larger details he no longer needed to check in with Doha as often but would need to discuss his (Ressam’s) trips to Vancouver with Dahoumane and near the time of execution discussions with Meskini began.

Faris also used a coded language to transmit messages back to Afghanistan. This plot, being planned nearly eight years later now used email as a medium but the theory behind the transmissions remained the same: secrecy is paramount. He was told to transmit messages through another individual that was located in the United States, then that individual would forward it on to Afghanistan. Furthermore, Faris was instructed to never immediately access his email when signing onto the internet, but rather to go to at least one other website first. As for the content of his messages, he was told to refer to the metal cutting tool that would be used to cut through the support cables of the bridge as *gas stations* and the train derailment tools as *mechanic shops*. Thus counterterrorism specialists must be aware that certain words are not being used in the right context or are being used much more than what a truck driver should be making reference to these topics.

It should be noted that this is all the further that the Brooklyn Bridge attack progressed. Faris had a lot of trouble finding out information about the tools needed to complete the task and he was also very skeptical about the plans success due to the extra security measures present at the bridge. Ultimately, he sent a message back to Afghanistan the said “the weather is too hot” which meant that Faris did not see the plot as being successful given the circumstances. It should be understood though that a large reason that the plot did not move forward was because of perceived security measures by Iyman Faris. This sense of added security would eventually cause Ressam’s plot to fail as well since he tried to flee when border patrol questioned him further at the security gate.

Indicators of Terrorist Activity

There will also be physical items to be observant of when looking for a terrorist cell; however depending on when the proposed execution of the plot will be, will determine what

items will be acquired. A terror cell will wait as long as possible to acquire resources that are easier to track or that can only be acquired through illegal means. Thus in the beginning of this phase they may purchase things like circuitry or timers (a wristwatch) for the bomb or unordinary amounts of batteries or hydrogen peroxide, but other more explosive chemicals the cell will only research how to acquire those substances and wait until the date of attack becomes more imminent. Examples of explosive substances that would be bought or acquired at a later date would include nitroglycerin, nitrate, sulfuric acid, nitrobenzene, silver azide, or liquid acetone. Each of these substances are highly explosive and thus when bought in large quantity may cause suspicion so the cell will wait as long as possible before purchasing anything of this nature.

The only exception to this may be if they can acquire what they need through a third source illegally and without causing any alarm. Ressay did this by contacting a friend to get a gun with a silencer. In another instance he would go from Montreal to Vancouver to buy farming fertilizer, called urea, which is a highly explosive material. In both cases it would not harm Ressay to purchase these since there was no reason for either scenario to cause alarm. However he did wait to get the nitroglycerin because that would need to be stolen from a farm fertilizer factory. The point of this being that counterterrorism specialists need to be aware of anything out of the ordinary, thus one must always be willing to think outside what seems to be normal.

In Operation Bojinka the acquisition of explosive chemicals had to be expedited since Yousef and Murad did not know how to make a bomb; they were forced to practice within the confines of their apartment. Ultimately this is how their plot was discovered since a bomb they were creating in their apartment accidentally exploded and the fire department was contacted to put the flame out. A chemical fire in a local apartment raised police suspicion and the plot was

discovered soon after the police started to investigate the apartment a little further (Department of Transportation, 1999). For homegrown terror cells, they will face a very similar problem and will be forced to work through trial and error. In the CERT (Community Emergency Response Team) training manual (2003) provided through the Department of Homeland Security they caution local law enforcement to be suspicious of things like

- Out of place and unattended packages, boxes, or vehicles. Terrorists have a long history of hiding explosive devices in packages, boxes, or vehicles. Items that are out of place and unattended could signal a possible terrorist attack.
- Packages that are leaking may be harmless—but they may also signal a terrorist incident. The terrorists who released Sarin in the Tokyo subway system (Aum Shinrikyo) merely poked holes in bags containing Sarin, then left the area as the poison leaked out.
- Materials or equipment that are unusual for the area. Dispersal devices, lab equipment, or quantities of hazardous materials that are not typically located in the area may indicate that a terrorist attack is occurring or is about to occur.
- Small explosions that disperse liquids, mists, or gases are an obvious sign that something is wrong.
- Unusual odors or tastes
(p. 8-7)

In general the CERT manual warns “Being aware of what is not in the environment that should be is as important as being aware of what is in the environment but is out of place” (2003, p. 8-7). The above list contains physical or environmental factors that counterterrorism specialists should be aware of. However, Post also details behavioral factors that could be equally as indicative of subversive training activity:

1. Group members appear in known terrorist training camps, sites or organizations.
2. Group members train in operational skills such as tradecraft (e.g. surveillance, counter-surveillance, and secure communications), weapons and explosives.
3. The group engages in operations such as bank robberies, thefts, kidnappings requiring skills similar to terrorist operations.
(2002, p. 92).

Transitions in Leadership

As a result of this phase of the planning there will have been a transition from the original hierarchy of the leaders being the original concept holders and financiers to the cell now taking charge of its own affairs. We see this in each of the examples provided: Ressam began his initial planning with Doha in order to work out whether or not he could move forward with the plot without the rest of his team. By the time he is ready to go back to Vancouver to build the bomb and then start to travel south into the United States he is adding members to his cell (Meskini) and is now tasking Doha with obtaining items such as identification and passports. Iyman Faris never reached the end of this phase thus we only observe his role as researcher; by the time he is picked up by the FBI he is still only transmitting reports back to Afghanistan on his progress. Yousef, in the beginning, was working with his financiers to ensure that his plot would be funded, but as soon as he had the funds began working entirely on his own with the cell he created. They operated independently of the individuals sending money. The quick transition for Ahmed Yousef could be attributed to his comfort level in executing these plots, after all he had just completed the initial World Trade Center bombing a little over a year earlier.

Thus the cell as it enters the next phase *decision to execute* will be a fully autonomous cell not requiring the same communication levels as needed in the beginning. However, where remote communication is lacking planning activity will increase exponentially while the cell acquired initially their non-traceable items and then finally the more volatile and dangerous resources that are much more traceable.

Observables for Counterterrorism Specialists

With this being said there are a number of things that counterterrorism specialists should be looking for as a cell progresses into and through the *decision to execute*. The first part of this

phase will include a lot of surveillance as the cell continues to refine their plot to make it fail proof. Early on in this phase counterterrorism specialists will look for suspicious individuals or just the same individual showing up to a sight day after day.

Additionally, if members of the cell are not US Citizens then it can be expected for this cell to thrive on fraudulent identification. Identity theft is a growing problem in the United States and does not appear to be on the decline (Identity Theft Resource Center, 2007). In the Millennial Bombing and Operation Bojinka members of the cells frequently used false identification and in each scenario there were key people in charge of identification and travel. From the law enforcement perspective, additional public training and education needs support and encouragement so that identify theft victims know to file a police report which would put an immediate “red flag” into play thus acting as a deterrent to this particular stolen identity being used falsely. Additionally, there needs to be more control on immigration violations, Ressam and Iyman both functioned within their respective societies for years without ever being detained by immigration. Having a functional false ID makes it very easy for terrorists to move in and out of our society. By making this aspect of their plot more difficult it was slow or may even stop the process entirely. The goal of any terror cell during this phase is to operate fluidly but inconspicuously as plans and resources are finalized, anything that could jeopardize their anonymity would greatly hinder their progress.

With the fear of homegrown cells higher than ever there is a silver lining - many of these were not specially trained in terrorist plots or attacks. Iyman Faris had no idea how to acquire metal cutting blowtorches or train derailment tools – he was forced to talk to an acquaintance that he barely knew to get more information. Yousef and Murad accidentally blew up their kitchen while trying to construct their explosives. In other cases like the Northern Virginia Jihad

Group were seen performing tactical training exercises at a local paintball facility. The Portland Seven trained in marshal arts, target shooting, and paramilitary tactics at myriad of rural areas around them. These homegrown cells although elusive can be detected. These cells will need a little more time and training in order to be effective, this is a clear counterterrorism advantage that can not be overlooked. Further counterterrorism specialists will want to watch for fires / explosions in remote or unpopulated areas or civilians inquiring or practicing military training exercises, these are all possible indicators of cell planning.

Based on the cases analyzed in this paper one can develop a list of patterns to look for:

1. Unusual purchasing patterns or the buying of excessive amounts of a certain product like Ressam's interest in agricultural fertilizer or Yousef's large amounts of acquired explosives.
2. Unusual interest in products or supplies like Iyman Faris's search for cable cutters and train derailment tools.
3. Missing or stolen supplies like Ressam's stolen chemicals from the agricultural plant in Vancouver.
4. Attempts to buy commercial / industrial / concentrated products like Iyman's interest in tools used on large bridges or Ressam's interest in large scale farming fertilizers.
5. Unusual activities taking place in inconspicuous or unordinary locations such as the Virginia Jihad groups training at the Paintball facility or the Portland Seven's paramilitary training in backwoods areas.
6. Generally will have large sums of cash on them which Yousef and Ressam operated on almost exclusively.

Each of these may not necessarily mean a terror cell is present but they are strong indicators of its likelihood. In general, counterterrorism specialists need to try and think in a broad encompassing view, something seen in isolation gives an entirely different viewpoint than when taken in context of the larger picture. For example, flight instructors from the Venice Florida training facility that trained 3 of the 9-11 conspirators "described Atta and Shehhi as aggressive and rude, and in a hurry to complete their training" (National Commission, 2004, p. 6). Additionally, "according to their flight instructors, Hazmi and Mihdhar said they wanted to learn

how to control an aircraft in flight, but took no interest in take-offs or landings” (National Commission, 2004, p. 14). This seen in hindsight tells a multitude of information that was not even conceivable before that date.

Once a cell has acquired all the resources for their plot and they have worked out a detailed plan on how to execute those resources then they will be ready to move into the next phase. As clarified above, Iyman Faris never reached this point, but Ressam and Yousef were able to progress their plot to the point where they were ready to execute. During this next phase, albeit short, is crucial; this is the period in the phase where counterterrorism specialists have their last opportunity to stop the progression of the plot. Once the plot reaches its execution phase the chances of stopping the plot decreases substantially.

Decision to Execute

The *decision to execute* is another transitional phase like *decision to move forward with concept* that will have a discussion or series of discussions where the cell will reevaluate their progress and choose the resultant outcome. The difference between this meeting and the last is that once this meeting takes place communication with their respective hierarchy will disappear and that cell becomes entirely autonomous. This is due to the fact that the last meetings take place to ensure that they can receive any last minute funding and then the cell’s only purpose is to execute, they will not need to communicate with their leadership for that.

Initial Activities in this Phase

Ressam contacted Doha to receive some last minute identification that would get him over the border into the United States. Ressam then contacted Haouari to ask for money to help him purchase his last few resources, Haouari agreed and within two weeks Ressam had

everything needed to finish planning the execution of his plot. Iyman Faris also contacted the individuals in charge of his plot, unlike Ressam, Faris was contacting them to inform them of his decision *not* to move forward with the plot. Finally Yousef and Khalif were supposedly often meeting to discuss financial details about the plot.

The other crucial part to this phase is that this is when cell members will acquire many of the traceable items that were avoided in earlier phases and will also be the period of time when test plot executions will take place. The reasoning for waiting so long is that these activities are the most observable and have the highest likelihood of causing discovery. Thus the cell waits as long as possible to perform any actions that may jeopardize the success of their plot until it is absolutely necessary to perform these actions.

The Millennial Bombing was to take place on December 31, 1999, Ressam waited until November before flying back to Vancouver with cash from Haouari to finish out details for his (Ressam's) plot. He met up with Dahoumane to purchase the last of the urea and to steal explosive material from the fertilizer factory. While in Vancouver he spent two weeks just preparing the explosives with the stolen chemicals. Each of these activities had a certain amount of risk associated with it thus it was ideal for Ressam to wait until now to complete those tasks.

Likewise Yousef used the same tactic in completing readiness for his plot. He and Murad ensured that they had all the correct resources to complete their plan, but waited until very close to the proposed date of execution to run their test plans. Shah tested the effectiveness of using a bomb under a seat by placing an explosive device in a local Manila theater to detonate at a given time. Additionally, Yousef tested airport security by taking a contact lens bottles through security with a clear liquid that would be nitroglycerin on the day of execution. He also wore extra jewelry to confuse the sensors so that he could put the fuse in his shoe without detection.

Once he moved the pieces of the bomb through security he was able to assemble the explosive in the bathroom of the in transit airplane and ultimately leave it under the seat of a passenger to detonate at a later predetermined time. Ressay, had he made it to Los Angeles, would have used a very similar approach to figure out where to place his suitcase bomb most effectively. He had wanted to take an empty suitcase and place it in different locations around the terminal to see how long it would take to be detected. The actual suitcase bomb would be placed and timed according to the outcome of these test runs.

These test executions are crucial to helping counterterrorism specialists realize that something bigger may be imminent. Every terror plot, although it may be based on a previously tested idea, is new for each situation and environment that is being executed in, thus it must be tested for validity in a successful execution. In the 9-11 plot, each pilot before the actual event “flew first class, in the same type of aircraft he would pilot on September 11” from this reconnaissance the terrorists determined “that the best time to storm the cockpit would be about 10-15 minutes after takeoff, when they noticed that cockpit doors were typically opened for the first time” (National Commission, 2004, p. 9-10).

Observables for Counterterrorism Specialists

. Counterterrorism specialists should be cautious of smaller acts of violence. Many high profile plots always begin with a test execution as such the list provided above by the CERT training manual cautions against sightings of certain environmental conditions, those conditions could be evidence of the previous phase or this phase, either of which should be cause for immediate action by counterterrorism authorities. For example the attack on the USS Cole was preceded by Al Qaeda operatives with an attack on the USS Sullivan. “Al Qaeda has repeatedly demonstrated its ability to test -- and then return to -- strike plans. For example, the attack

against the USS Cole in October 2000 was at least the second attempted suicide strike against a U.S. naval vessel that year; the first was a failed attempt against the USS Sullivan in January” (Burton, 2007). In the case studies being analyzed in this paper that came in the form of an explosion in a local theater, a smaller explosion on an airliner and what would have been empty suitcases being left inconspicuously around the Los Angeles Airport. Furthermore, the disappearance of dangerous chemicals or strange purchasing patterns of any substance that in large quantity could cause harm should prompt further investigation. This phase has a large escalation component from previous phases, so there is considerable room for accidents or detection. For the counterterrorism specialist who is able to visualize a larger picture than the situation currently being responded to may mean the difference between an isolated incident versus observing components of a larger plot. The almost certain conclusion that one can draw about a plot that reaches this phase is that it will progress directly into the final stage of the evolutionary cycle: *execution of the terror plot*. There is no outside catalyst that needs to take place to make a transition the execution phase. Once the terror cell is comfortable with the test executions of their plot and they have everything prepared for the plot, the cell will execute, there is nothing stopping them at this point.

Phase III – Execution

Although none of the case studies being analyzed achieved this final execution stage, they were each well on their way to reaching this point. This stage is the culmination of the other stages put together. At this point in the process the cell will reestablish its base to the location of attack, if not already there, and will execute what has been thoroughly rehearsed and tested. For the 9-11 conspirators

“The last step was to travel to the departure points for the attacks. The operatives for American Airlines Flight 77... gathered in Laurel, Maryland, about 20 miles from Washington, DC. The Flight 77 team stayed at a motel in Laurel during the first week of September and spent time working out at a nearby gym. On the final night before the attacks, they stayed at a hotel in Herndon, Virginia, close to Dulles Airport. Further north, the operatives for United Airlines Flight 93... gathered in Newark. Just after midnight on September 9, Jarrah received this speeding ticket as he headed north through Maryland along Interstate 95, towards his team’s staging point in New Jersey” (National Commission, 2004, p. 10).

Observables for Counterterrorism Specialists

A cell at the *execution* stage in the process will now function as a well-trained, dynamic team. Each person in the cell has a role and completes that role independent of what other cell members are tasked. There will be minimal communications to trace and there will be no need for monetary transactions since at this point all resources are in place. The only hope that counterterrorism specialists have is that something suspicious draws their attention at the very time of execution or that something goes wrong and the execution is stopped because inadequate preparation on the fault of the cell. Either scenario although possible is highly unlikely for a cell that has planned effectively.

If a counterterrorism specialist is suspicious of a vehicle in a certain area that is trying to access a restricted zone, this would be a clue that something is probably being hidden in a section of the vehicle. The question becomes, ‘*what is suspicion and where does it come from?*’ Elliot

Grollman, member of Washington's Law Enforcement Working Group on Weapons of Mass Destruction, in a recent personal interview described it as a "gut feeling and you can't ignore that...You've got to go by behavior". When the plan is in motion there is nothing left to act on but instinct itself. It is the responsibility of every counterterrorism specialist no matter their position or rank to act to the best of their ability when the time comes.

Ressam was on his way to pick up Meskini to transit to the plot execution location when border patrol became suspicious of Resam's behavior. Shortly after he was detained, explosives were discovered in the trunk of his vehicle. Likewise Yousef had tested everything to ensure that his plot would be a success but was discovered when a chemical fire started in the kitchen of his Manila apartment and local authorities became suspicious of all the apparatus and chemicals in his apartment. Police eventually discovered the plans for the destruction of twelve airliners on a laptop that was left in the apartment after Yousef fled.

Generalized Model

As a result of thorough analysis of each case study and showing where patterns have emerged, the following model gives an overview of what those patterns produce in the evolution of a terror cell. When confronted with such overwhelming information against us, we must look to what we do have control over: our environment. Organizational contingency theory, deriving from open systems theory, suggests that regardless of size, orientation or mission, terrorist organizations operate within the confines of their environments and resources. Combined with Charles Tilly's observations about repertoires of contention, it follows that the feasible space of terrorist organizations' actions and behaviors is bounded, and selection of tactics limited (2006). There seems to be reoccurring evidence that terrorist organizations tend to plan simultaneous and large-scale attacks with most attacks being based on previously successful attacks. This is a very good thing since this means more evidence and cues to look for. "Killing as many as possible seems to have been the paramount criterion in most of the plans". (Jenkins, 2006). "Although many of the schemes appear to be drawn from the same playbooks as the terrorist attacks that did occur" (Jenkins, 2006). In the following pages this paper suggests that a plot can be broken down in lifecycle by phases based in environmental cues, the same cues that can be used by law enforcement and counterterrorism authorities to combat terrorist infiltration.

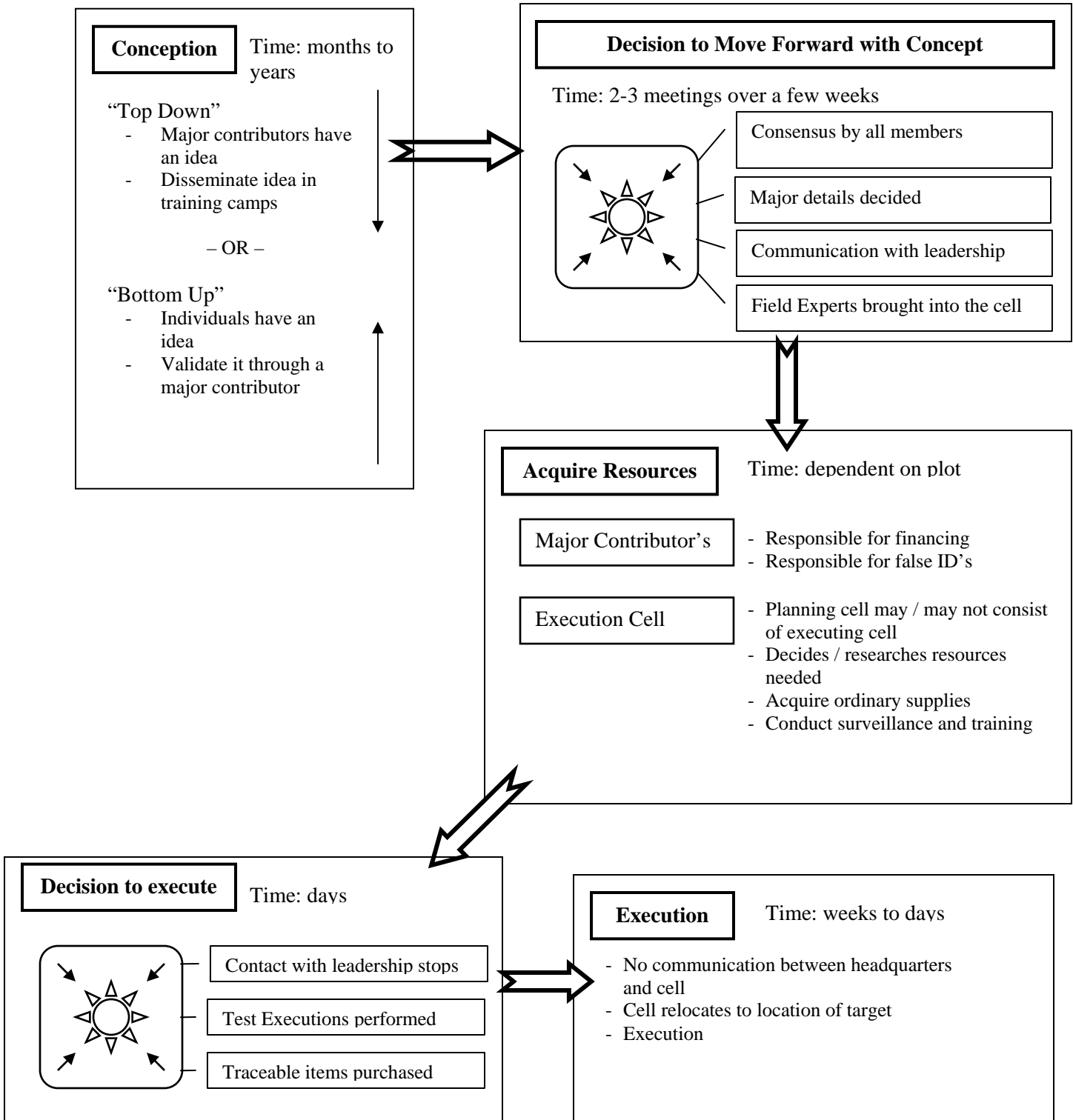


Figure 2: Generalized Model
(Developed by Kathleen A. Giebel)

Conception

The general timeline for the conception of a plot is varied and will be dependent on a myriad of factors including who makes up the cell and what the target might be. However, we can generalize conception of the ideas to come from two different sources, bottom-up or top down. In terms of this paper, an idea that is conceived *bottom up* exists when a member of a cell or an independent member creates an idea initially and then that idea is approved by a leadership figure. The Millennial Bombing is an example of this type of plot. Conversely a plot that is considered *top down* is one that is conceived by the authorities of an organization and then delegated to cell members for execution. The plot to destroy the Brooklyn Bridge would be an example of a top down plot conception.

During the conception of a plot there will be one or more meetings that are usually private and led by leadership figure. These meetings can take place within the US or abroad, especially at training camps where brainstorming is highly encouraged. From this brainstorming, regardless of source, a rough sketch of an idea or plot will emerge. At this point there is nothing concrete, just a series of ideas that may or may not be recorded.

At this stage there will be an easily identifiable leader since the cell has not been solidified and members have not bought in yet. As such there are a number of identifiers to cue such a group is being established. This is one of the few times in the lifecycle of a terror plot that the terrorist organization will have to reach out beyond the edges of their group to find members that will help with their plot thus making visible to counterterrorism specialists. However, they only become visible if one knows what to look for. Trust is a large part of who is allowed into the cells and furthermore what information is given to an individual. Indicators that recruitment may be taking place could be observed in the transformation of a group's outgoing

communications via pamphlets or brochures. If a groups outgoing communication is changing from discussions of values to a more violent or radical viewpoint it could be indicative of subversive activity. Another indicator may be the transition of an open group moving towards much more closed and secret. Often when this happens, large attrition rates and screening will begin to take place within the group thus one will also see a transition in acceptable criteria to become a member of such a group as well (Post et al., 2002, p. 90).

Counterterrorism specialists would do well to catch any terrorist planners at this stage since it is often the weakest point in the lifecycle of the cells progression, there is a single point of failure present in the recruiter or leader of the cell. Other members of the cell have not bought into the plan yet and are still not as committed as the leader of the cell. Also realize that terror cells will want to think on a scale of grandeur and thus an idea of moderation will be their downfall. The more individuals that need to be brought into a cell's planning means the bigger probability of its detection. Finally, counterterrorism specialists need to be aware of the growing connection between terrorism and crime; more and more illegal means are being used to fund terrorist activity.

Decision to Move Forward with Concept

This phase is crucial in the development of a terror cell, but will not take very long to come to a conclusion, since it will only consist of a meeting or set of meetings that at least in this analysis have taken place in person. There will be very specific people involved with this phase including, whoever the financier (or future financier) of the plan will be, plotters or cell members, and the leadership or management. As stated above, this meeting will be pushed by a leader to move forward, there will still be a single point of failure at this phase since by neutralizing the agitator (the individual pushing a decision) or by stopping the financing, all plans must be called

off or at the very least postponed. In some cases one individual may represent multiple portions of members present in this meeting. For example the leadership of a cell might also be financing their ventures. This push for a decision can come as a result of many factors including a charismatic leader or a recent terrorist plot success or failure. The most important result of this phase is that there is general consensus by all members to move forward. At the conclusion of this phase and the onset of the next will be an excellent point of infiltration for counterterrorism specialists, as the terror cell will be looking for field experts in whatever field their plot may require.

Acquire Resources

This period of cell development does not have an exact length although its beginning and end is specifically defined as the point in which the cell decides to stop brainstorming and concedes on one plot to move forward with and then ends as the cell decides that all resources and preparation is complete. This phase can be considered the most easily observed since this is the point in the lifecycle of a terror cell where the cell will concentrate all its energies on preparing specifically for the execution of the plot thus time is spent acquiring all the resources, people and skill sets necessary to execute the plan. As such it is hard to pinpoint an exact amount of time since in many cases this is directly dependent on what the plot consists of and the amount of effort needed to execute the plan. Counterterrorism authorities must be aware that even though these illegal activities are occurring, the terror cell will be continually trying to assimilate themselves into the population as much as possible during this phase. However, surveillance is a major part of this phase and as such the terror cell will need to put themselves at the scene of where the plot will be executed. It is paramount to be looking for suspicious activity at sites where terrorism might take place.

By now the individuals involved have changed, the primary focus will be on the terror cell specifically and not on individuals like management or financiers, thus the command structure at this phase can be considered very horizontal as opposed to a hierarchal structure. This phase is for the actual team to verify the validity of their plan being executed. Generally, each cell member will have a specific role in the plan and will only focus on that role; as such there is not much collaboration between cell members unless a certain portion of the plan overlaps. There may still be some communication between management and cell members but it will be minimized and often presented in coded language in order to avoid detection.

Early on in the phase the cell will acquire non-suspicious resources like piping or timers and will begin honing their skills such as tactical military training or learning how to fly a plane in the example of the September 11th attackers. Additionally, even though they will not purchase traceable items like explosives, they will at the very least research where and when to buy those items.

Decision to Execute

This phase can be considered the point of no return, if a terror cell progresses to this phase their chances of following through and being successful is very high and strongly dependent only on the efficiency to which they can execute their own plans. In other words, there is little that can be done in this phase by counterterrorism authorities in the area of prevention. This phase, like the decision to acquire resources is very short, and also quite critical. Once again the terror cell must all agree that they have thoroughly planned and trained and are ready to move forward with the last portion of their plan: execution.

In terms of command and control the cell will momentarily return to a hierarchal structure before returning back to an asymmetric control structure. There will be contact with the

cell leadership and financing to ensure that they are still allowing this plan to proceed and there will often be an exchange of money for the last few resources specifically those resources that are traceable. The idea is to wait as long as possible to acquire those items to give counterterrorism authorities the least amount of time as possible to respond to any alerts. During this phase there will also be test executions, for example in Operation Bojinka there was a minor explosion on an airliner simply to test security. Other common tests are to leave bags or vehicles unattended with nothing in them just to see how long it would take someone to notice them.

An interesting aspect to this phase is that once the cell has received approval from their leadership all communication with those individuals is severed. They are now acting as an independent group and will carry out the rest of the plan without external input. Thus when the cell has acquired their last minute resources like explosives and feel satisfied that test plot executions (if there are any) are acceptable they will gravitate directly into the execution phase.

Execution

The final phase is completed within weeks of the conclusion of the previous phase and as stated earlier will have no observable communications. At this point the cell can be treated as well trained separate entities each completing their portion of the plot within the parameters decided upon during earlier phases. This phase can be likened to a well-oiled machine; there is no need for discussion or preparation, only action. Counterterrorism specialists must now rely on the fact that they have enough security measures in place to stop any plan that might be attempted and also pay close attention to the gut feelings of suspicion and question any scenario that might present such a feeling.

Conclusion

“The relationship between nascent non-state organizations and the environments that create and nurture them remain largely unexplored” (Thomas, Kiser and Casebeer, 2005, p. xi). However, we know that “organizations must interact with their environment to survive; it both consumes resources and exports resources to the environment” Thomas, Kiser and Casebeer, 2005, 11). These resources are all evidence that can be used by counterterrorism specialists to detect and deter plots within their environment.

“Where as once we would have caught a robber red-handed and that would have been enough to satisfy the legal case, we now have to stop and ask ourselves, who is this robber? ... Is he stealing to feed a drug habit? OK, who is he buying his drugs from? Or is he robbing to raise funds to buy guns for a gang? Which gang? Who are his associates? Or is he part of organized crime or something else? The aim is to drill down into crime to get a complete picture of the crime landscape in your community.”(Block, 2007) Chief Barton from the Los Angeles police department explains the issue of fighting the war on terror within our own country quite well in this previous quote by highlighting the growing connection between crime rings in our country and terrorism on an international scale. As result of this paper a law enforcement officer or an intelligence analyst can now look at a situation and know what to look for. Furthermore, given certain feedback from the environment they will be able to see how progressed a certain plot may be.

In general we see that information provided to counterterrorism authorities is extremely dependent on connectivity and information flow. “The government’s so called war-on-terror is about making friends” (Suskind, 2006, p. 48). In order to be successful in our attempts to combat the war on terror there needs to be an emphasis on ensuring that information flow is frequent,

stable and secure from the top most member of the CIA down to the law enforcement officer in the New York City subway. Being able to rely on informational cues in the environment means that someone has to be there to observe such changes, thus if one person observes something out of the ordinary he needs to be able to inform anyone necessary to ensure that the proper response is completed in enough time to make a difference. This type of response can only be accomplished when communication pathways are open and frequent.

As Fred Burton mentioned in his Stratfor Intelligence Report, homegrown and terrorists are continually fixated on large scale attacks as seen in the recent disrupted plot at Heathrow Airport in the United Kingdom (Burton, 2007). This fact is quite beneficial to counterterrorism specialists since the larger the plot, the more people, resources and funding is required thus there is more of a trail to follow. However, as a counterterrorism specialist, one must know what the trail looks like and then how to react to evidence that is observed.

Authors of Warlords Rising pose an intriguing question in response “One way of preventing niche construction on the part of a developing VNSA [Violent Non-State Actor] would be to ask what affordances would this organization strive to make a part of its environment?” (Thomas, Kiser and Casebeer, 2005, p. 23). By looking at the three given case studies and analyzing these research points in depth we were able to see some overarching similarities or points of interest that counterterrorism specialists should highlight. First and foremost, these individuals moved through our system by using fake identification and stolen goods. In two of the case studies there was travel to or from Afghanistan for a meeting or some kind of training. Upon their return to the United States Iyman and Ressam each brought a large amount of cash with them to start their resource acquisition phase. In Ressam’s case, he also brought back chemicals that would later be used to construct a bomb.

Once the cell was in place they would use coded language to communicate. Iyman Faris used a language that was given to him by his superiors such as gas station for metal cutting torches or a mechanics shop for train derailment tools. This is not the first time we have seen coded language, other cases have used coded language as well. (Suskind, 2006, p. 155-57).

Ressam would just speak in Arabic if he did not want to be understood.

Realize that any terror plot will need to survey their site before attacking it and this is a major weakness in their progression through plot conception to execution. Ressay noted that when preparing for a terrorist act there is a number of precautions that can be completed to ensure their own success:

1. Look like a tourist.
2. Spend much time surveying your site.
3. When working in a cell preserve your secrets, everyone operates on a need to know basis.
4. If speaking on a phone talk normally and controlled or speak in another language. (Ollen, July 3 2001, p. 551-2)

Counterterrorism specialists need to rely on their gut feeling of suspicion and be always aware of what is taking place within the environment they exist in to realize something abnormal is taking place. These specialists have the advantage that they are experts in their own field, they know their area and what normal operations look like; terrorists do not have this benefit. They are coming in from another area and trying their best to blend in, but an expert will be able to tell the difference.

In each case study there is a certain progression with the cell development and known weaknesses for that stage. By realizing those weaknesses exist, counterterrorism specialists can use that information to their advantage to exploit that stage limitation. In order to be successful with terrorist attacks there needs to be an increase in communication. Teach passengers on a plane what to look for or to notice when someone has been in the restroom for an inordinate

amount of time. Make sure that traffic law enforcement officers know what to look for when stopping a suspicious car or replying to someone's luggage or identification being stolen. Notice drug rings that are growing or acting abnormally, in general know who you are tracking. Mr. Grollman in a recent interview said "Sharing information is critical, communication is critical". The job is on every citizen to know what to look for and how to respond once that discovery is realized, that is the only way to fight this global war on terror.

Works Cited

Azani, Eitan. "Understanding the Indoctrination: Commentary regarding the Intelligence and Security Committee's report of the July 2005 London attacks". Understanding the Indoctrination. Institute for Counter-Terrorism. May 2006.

<<http://www.ict.org.il/apage/3626.php>>

Block, Robert. "An L.A. Police Bust shows New Tactics for Fighting Terror." Terrorism Open Source Intelligence Report TR262A05 (2007): January 26, 2006. Terrorism Open Source Intelligence Report. Wall Street Journal <<http://www.wsj.com>>.

Burton, Fred. "Al Qaeda in 2007: The Continuing Devolution." Terrorist Intelligence Report December 27, 2006 Stratfor

<http://www.stratfor.com/products/wtr/read_article.php?id=282341>.

---. "The Lessons of the Library Tower Plot." Terrorist Intelligence Report. February 16, 2007.

Stratfor. <http://www.stratfor.com/products/premium/read_article.php?id=262289>

---. "The U.K. Plot: Lessons Not Learned and Risk Implications." Terrorist Intelligence Report.

August 16, 2006. Stratfor.

<http://www.stratfor.com/products/premium/read_article.php?id=272745>

Denny, Laurita M., Jerrold M. Post, Ehud Sprinkak. "The Terrorists in their Own Words:

Interviews with 35 Incarcerated Middle Eastern Terrorists." Volume 15.Number 1/Spring

2003 (2003): April 4, 2007. . April 4, 2007

<<https://commerce.metapress.com/content/fj54tge0ych08njl/resource->

[secured/?target=fulltext.pdf&sid=2qz2qri00elngo45zpyllg45&sh=taylorandfrancis.metapress.com](https://www.tandfonline.com/doi/fulltext/10.1080/10439862.2003.10555555)>.

Department of Transportation: Federal Aviation Administration. Security of Checked Bags on Flights within the United States. Trans. Federal Register. Security Proposal ed. Vol. Docket No. FAA-1999-5536; Notice No. 99-05. Washington D.C.: Federal Aviation Administration, 1999.

---. Washington, DC Metropolitan Area Special Flight Rules Area. Trans. Federal Register. Proposed Rule ed. Vol. Docket No. FAA-2003-17005; Notice No. 05-07. Washington D.C.: Federal Aviation Administration, 2005.

DONALD H. RUMSFELD, Secretary of Defense, Petitioner, v. JOSE PADILLA and DONNA R. NEWMAN, as next of friend of Jose Padilla, Respondents. 2003 US Briefs 1027. 1-20. No. 03-1027. Supreme Court of the United States. 2004. Online. LexisNexis® Academic. (21 February 2007).

Eisenhardt, K.M. "Building Theories from Case Study Research," *Academy of Management Review* (14:4), 1989, pp. 532-550.

Eisenhardt, K.M. and Graebner, M.E. "Theory Building from Cases: Opportunities and Challenges," *Academy of Management Review* (50:1), 2007.

Farley, Jonathan David. "Breaking Al Qaeda Cells: A Mathematical Analysis of Counterterrorism Operations (A Guide for Risk Assessment and Decision Making)." Studies in Conflict & Terrorism 26.6 (2003): 399-411.

Grimmer, Pat. "In Search of Al Qaeda, Glossary and Identifications." Frontline. 2007. WGBH Educational Foundation.

<<http://www.pbs.org/wgbh/pages/frontline/teach/alqaeda/glossary.html>>.

Gerwehr, Scott, and Sara Daly. "Al Qaeda: Terrorist Selection and Recruitment." National Security Research Division Chapter 5 (2006): 73-89.

<http://www.rand.org/pubs/reprints/2006/RAND_RP1214.pdf>

Grollman, Elliot. Personal Interview. March 21, 2007.

Hirschorn, Phil. "Top Terrorist Conviction Upheld." CNN.com April 4, 2003 2003, sec. Law Center:. CNN New York Burea.

<<http://edition.cnn.com/2003/LAW/04/04/terrorism.yousef/index.html>>.

Holschen, John. "The Training and Tactics of International Terrorists." Trexpo West. Long Beach, California, March 19-21, 2007.

Human Technology, Inc. Unit 8: Terrorism and CERT. Ed. CitizenCorp. Vol. IG-317.

Washington D.C.: Department of Homeland Security, 2003. March 7, 2007

<<https://www.citizencorps.gov/cert/downloads/training/PM-CERT-Unit8Rev2.doc>>.

Identity Theft Resource Center. "Facts and Statistics." February 21, 2007. April 1, 2007

<<http://www.idtheftcenter.org/facts.shtml>>.

Jenkins, Brian Michael. "Unconquerable Nation: Knowing our Enemy Strengthening Ourselves." Terrorism Open Source Intelligence Report No. 260.Item 3 (2006): 7 JAN 2007.

http://www.rand.org/pubs/monographs/2006/RAND_MG454.pdf.

Jordan, Javier. "Mapping Jihadist Terrorism in Spain." Studies in Conflict & Terrorism 28.3 (2005): 169-88.

Kelley, David N. and Michael J Garcia, Assistant United States Attorneys. United States v. Yousef, 327 F.3d 56. 327 F.3d 56; 2003 U.S. App. ed. Vol. Docket Nos. 98-1041 L, 98-1197, 98-1355, 99-1544, 99-1554. New York, NY: UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT, 2003. LexisNexis. LEXIS 6437. February 22, 2007

http://www.lexis.com/research/retrieve/frames?_m=9419a3b827815f29e31fce1893477c15&csvc=fr&cform=free&fmtstr=CITE&docnum=1&_startdoc=1&wchp=dGLbVlb-zSkAl&md5=a3c11381d75f2e4561d37d6f3b508fc9.

Klaidman, Daniel, et al. "Al Qaeda in America: The Enemy within." Newsweek 23 JUN 2003 Hindu Vivek Kendra Database [http://www.hvk.org/articles/060 Stratfor 3/173.html](http://www.hvk.org/articles/060%20Stratfor%203/173.html).

"Londonistan,' Al Qaeda and the Finsbury Park Mosque." Terrorist Intelligence Report. August 12, 2005. Stratfor. http://www.cpt-mi.org/html/_stratf_londonistan_alqaeda.html.

Major General John S. Cowings, US Army. "The Environment of Strategic Leadership and Decision Making." Strategic Leadership and Decision Making. Ed. Industrial College of the Armed Forces. 1st ed. Washington D.C.: National Defense University, 1999. Chapter 1,

Section 4. Air War College: Analysis and Decision Making.

<http://www.au.af.mil/au/awc/awcgate/awc-thkg.htm#analysis>. 12 DEC 2006

<<http://www.au.af.mil/au/awc/awcgate/ndu/strat-ldr-dm/cont.html>>.

McNulty, Paul J. Deputy Attorney General. Prepared Remarks of Deputy Attorney General Paul

J. McNulty at the American Enterprise Institute. Washington D.C., May 24, 2006. April 1,

2007 <http://www.usdoj.gov/dag/speech/2006/dag_speech_060524.html>.

National Commission on Terrorism Attacks. Outline of 9/11 Plot. Vol. No. 16. Washington D.C.:

Department of Homeland Security, 2004. March 8, 2007. <[http://www.9-](http://www.9-11commission.gov/staff_statements/staff_statement_16.pdf)

[11commission.gov/staff_statements/staff_statement_16.pdf](http://www.9-11commission.gov/staff_statements/staff_statement_16.pdf)>.

Ollen, Daniel. United States of America v Mokhtar Haouari. Trans. United States District Court

Southern District of New York. Ed. Southern District Reporters, P.C. 2 of 2 ed. Vol. S4 00

Cr. 15. New York, NY: Southern District of New York, July 5, 2001. Findlaw.com.

Southern District of New York Court House. Dec 12, 2006

<<http://news.corporate.findlaw.com/hdocs/docs/haouari/ushaouari070501rassamtt.pdf>>.

---. United States of America v Mokhtar Haouari. Trans. United States District Court Southern

District of New York. Ed. Southern District Reporters, P.C. 1 of 2 ed. Vol. S4 00 Cr. 15.

New York, NY: Southern District of New York, July 3, 2001. Findlaw.com. Southern

District of New York Court House. Dec 12, 2006

<<http://news.corporate.findlaw.com/hdocs/docs/haouari/ushaouari70301rassamtt.pdf>>.

Peck, Andrew J. Honorable. United States of America v. Abu Doha. Ed. David N. Kelley. Vol. 01MAG. 1242. New York, NY: USA, 2001. FindLaw.com US District Court of New York. Dec, 12, 2006
<<http://news.corporate.findlaw.com/hdocs/docs/abudoha/usabudoha70201cmpt.pdf>>.

Post, Jerrold M., Keven G. Ruby, and Eric D. Shaw. "The Radical Group in Context: 1. An Integrated Framework for Analysis of Group Risk for Terrorism." Studies in Conflict & Terrorism 25.2 (2002): 73-100.

---. "The Radical Group in Context: 2. Identification of Critical Elements in the Analysis of Risk for Terrorism by Radical Group Type." Studies in Conflict & Terrorism 25.2 (2002): 101-126.

Ressa, Marie. "Tracing the Asian Terror Links." CNN.com September 22, 2001, sec. World: CNN.com. March 8, 2007.
<<http://edition.cnn.com/2001/WORLD/asiapcf/southeast/09/22/gen.terrorism.asia/index.htm>
>

Roberts, Brad Dr. "Terrorist Campaigns: What can Deterrence Contribute to the War on Terror?" "Terrorist Campaigns: What can Deterrence Contribute to the War on Terror?". MIT Securities Study Program, 26 FEB 2003. 12 DEC 2006
<http://web.mit.edu/SSP/seminars/wed_archives_03spring/roberts.htm>.

Sanchez, Rick. "Paula Zahn Now." CNN.com 2004, sec. Transcripts: 1-25. March 7, 2007

<<http://edition.cnn.com/TRANSCRIPTS/0411/24/pzn.01.html>>.

"Security Alert: Planes are Still Targets." CNN.com 16 OCT 2003, sec. US: 11 JAN 2007

<<http://www.cnn.com/2003/US/10/16/homeland.alert/index.html>>.

Sinclair, Frederick J. United States of America v. Iyman Faris. Ed. Eastern District of Virginia

Recorder. 1st ed. Alexandria, Virginia: Eastern District of Virginia: Alexandria Division,

2003. Findlaw.com. US District Court: Alexandria, Virginia. December 27, 2006

<<http://fl1.findlaw.com/news.findlaw.com/hdocs/docs/faris/usfaris603plea.pdf>>.

Suskind, Ron. The One Percent Doctrine, Deep Inside America's Pursuit of it's Enemies since

9/11. New York: Simon&Schuster, 2006.

Thomas, Troy S., Stephen D. Kiser, and William D. Casebeer. Warlords Rising, Confronting

Violent Non-State Actors. Lanham; Boulder; New York; Toronto; Oxford: Lexington

Books, 2005.

Tilly, Charles. Regimes and Repertoires. Chicago: University Of Chicago Press, 2006.

Uniting Against Terrorism: Recommendations for a Global Counter-Terrorism Strategy. Vol.

A/60/285. United Nations: General Assembly, 2006. 12 DEC 2006

<<http://www.un.org/unitingagainstterrorism/contents.htm>>.