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A TERRORIST ORGANIZATION AS A SYSTEM:
UNLEASHING WARDEN'S FIVE-RING MODEL

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Maritime Operations.

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ABSTRACT

A TERRORIST ORGANIZATION AS A SYSTEM: UNLEASHING WARDEN'S FIVE-RING MODEL

The United States is actively engaged in a War on Terrorism. One of the major hurdles in developing a strategy to defeat terrorism is performing an accurate net assessment of a shadowy non-state organization and then translating that assessment into a clear set of critical vulnerabilities. A tool, created by Colonel John Warden, already exists to aid planners in this process. This paper shows how Colonel Warden's system-based approach (five-ring model) can accurately model a terrorist organization, identify centers of gravity and critical vulnerabilities, and provide a strategic and operational blueprint on how to bring all the elements of national power against those vulnerabilities.

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CHAPTER 1

INTRODUCTION

The American people need to know that we're facing a different enemy than we have ever faced. This enemy hides in shadows, and has no regard for human life. This is an enemy who preys on innocent and unsuspecting people, then runs for cover. But it won't be able to run for cover forever.

President George W. Bush¹

On September 11, 2001, international terrorism dramatically struck the United States at home. The attacks on the World Trade Center and the Pentagon shattered any illusions Americans may have had about security and sharply brought into focus the tangible threat terrorism poses to the American way of life. During the aftermath of the attacks, the debate raged around the globe on how best to combat terrorism, with options ranging from more aggressive counterterrorism (CT) programs to enhanced antiterrorism (AT) policies. This heated debate continues today and often produces more questions than concrete answers.

Answering the difficult question of how best to combat terrorism has confounded terrorist experts and policy makers for years. One critical aspect of this problem is the seemingly insurmountable task of analyzing near invisible terrorist organizations to determine suitable courses of action. For example, a former State Department counterterrorism coordinator has stated about Usama bin Laden: “We are the root cause of his terrorism...And short of the United States going out of existence, there’s no way to deal with the root cause of his terrorism.”²

While analyzing a secretive terrorist organization is problematic, Colonel John Warden has developed a simplified model for analyzing organizations by treating them as a system. Taking a strategic viewpoint of the enemy, Warden's five-ring model focuses on the entirety of the enemy to produce "a comprehensible picture of a complex phenomenon so that we can do something with it."³ Warden's model has gained acceptance around the world with a number of airpower advocates as a means to ascertain an enemy's critical vulnerabilities. However, despite this acceptance, use of the model has traditionally been limited to United States Air Force planners developing major air operations.

Constraining the five-ring model to lethal applications of airpower is a mistake. This paper will show how Warden's five-ring model provides a strategic and operational blueprint to combat terrorist organizations. Warden's model, when applied to a terrorist organization, will reveal critical vulnerabilities within the terrorist organization and provide insight on how these vulnerabilities can be subjected to various forms of national power, including lethal and non-lethal means. Accordingly, Warden's five-ring model is an indispensable planning tool and should be used by commanders and planners during the War on Terrorism.

As stated earlier, terrorism is an extremely complex issue. As such, this paper will limit itself to the analysis of a terrorist organization using the five-ring model and will focus on counterterrorism. Since the application of Warden's model to an enemy reveals an enemy's critical vulnerabilities, it inherently falls within the regime of CT by offering methods "...to prevent, deter, and respond to terrorism."⁴ Finally, a robust, but generic terrorist organization, based upon unclassified understandings of existing terrorist organizations, is used during analysis as an illustrative example to demonstrate the applicability of the model across the wide spectrum of international terrorist organizations.

CHAPTER 2

BACKGROUND

But in war more than in any other subject we must begin by looking at the nature of the whole; for here more than elsewhere the part and the whole must always be thought of together.

Carl von Clausewitz⁵

The Enemy as a System

Colonel Warden developed his system-based five-ring model from the many lessons he learned during the initial planning stage of the air operation for Operation Desert Storm. Warden asserts his “five rings are merely a model of the real world of systems built around life-forms of any type” and that his model can “describe most systems with acceptable accuracy and...is easily expandable to get finer detail as required.”⁶

The five rings consist of leadership, organic essentials, infrastructure, population, and fielded military/fighting mechanism (See Figure 1). As part of a net assessment, the five-ring model is applied to the enemy organization to identify critical vulnerabilities and centers of gravity. Each organization produces unique results depending upon many different factors (type of organization, level of industrialization and technological development, natural resources, geography, etc.). Warden’s

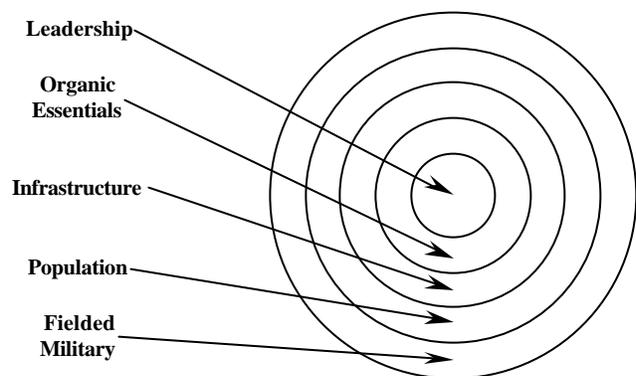


Figure 1 – Warden’s Five-Ring Model

model forces planners to consider the interdependence of each ring and look at the totality of the enemy, and not just see the enemy as some quantity of tanks and airplanes.⁷ As shown by the results in Table 1, the five-ring model can be applied to an entire nation-state all the way down to an individual.

	State	Electric Grid	Body
Leadership	Government - Communications - Security	Central Control	Brain - Eyes - Nerves
Organic Essentials	Energy (Electricity, Oil, Food) and Money	Input (heat, hydro) and output (electricity)	Food, Oxygen
Infrastructure	Roads, Airfields, Factories	Transmission Lines	Vessels, Bones, Muscles
Population	People	Workers	Cells
Fighting Mechanism	Military, Police	Repairmen	Leukocytes

Table 1 – System Attributes⁸

While the five-ring model’s focus is typically on the center ring and the desire to influence the enemy leadership, Warden states it may be necessary to attack critical vulnerabilities in the other rings to achieve the desired objectives and proposes the use of parallel attack to bring “...so many parts of the enemy system under near-simultaneous attack that the system simply cannot react to defend or to repair itself.”⁹

In summary, Warden’s system-based approach requires you to identify your political objectives, determine how to induce the enemy to accept your objectives (imposed cost, paralysis, or destruction), use the five-ring model to identify critical vulnerabilities, and attack those vulnerabilities in parallel as quickly as possible.¹⁰

The Organization of Terror

The most recent issue of *Patterns of Global Terrorism* outlines 44 active terrorist groups. While each terrorist group develops an organizational structure to suit their own operating environment and needs, many similarities still exist between them. For example, the typical hierarchical structure for terrorist organizations is common between the groups and can be depicted as a pyramid (see Figure 2).

At the top of the pyramid is the hardcore leadership, which makes policy and directs actions.¹¹ The next level contains the active cadre or terrorists. These individuals are the doers and carry out terrorist attacks and provide training.¹² The third group is made up of active supporters, individuals who do not commit violent acts but actively assist the terrorists by providing financial assistance,

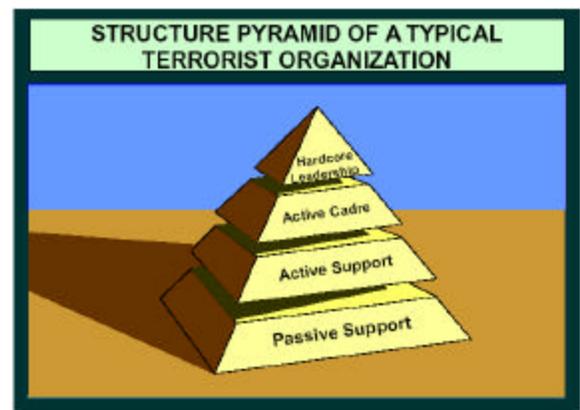


Figure 2¹³

intelligence, legal or medical services, mission support, or safe houses.¹⁴ The largest group is the passive supporters or individuals sympathetic to the terrorists and possibly their cause. This group of supporters represents a favorable political climate for the terrorist and it from this group the terrorist organization actively recruits new members.¹⁵ The most common job in a terrorist organization is support (bottom two layers of the pyramid), with the majority of the people serving to keep the active cadre in the field.¹⁶

Within the layers of the pyramid lies the organizational structure and subunits of the terrorist group. The cell is the most basic type of subunit and is comprised of 4 to 6 people performing a specialized task, which could range from intelligence to tactical operations.¹⁷

Since security is the primary concern for terrorist groups, each cell normally performs specific tasks isolated from the other cells.¹⁸ The structure depicted in Figure 3 is typical for a large number of terrorist groups, including Abu Nidal, HAMAS, and Aum Shinrikyo.¹⁹ It should be noted that while the organizational structure shown in Figure 3 appears to be highly centralized, the necessity for secrecy forces terrorist groups to decentralize their operations and allow cells to operate with a high degree of autonomy.²⁰

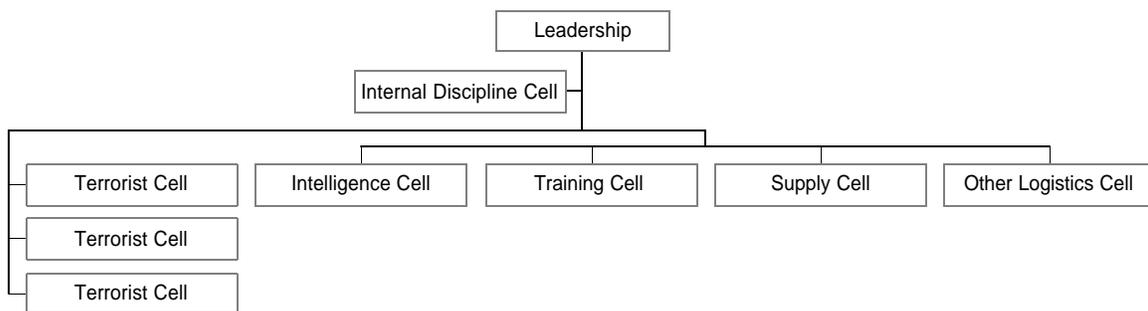


Figure 3 – Terrorist Group Organizational Structure²¹

One final characteristic of terrorist organizations must be mentioned. Inspired by the Popular Front for the Liberation of Palestine (PFLP), the concept of the magic triangle shows a terrorist group, like most other organizations, relies upon the dynamic interaction of money, manpower, and the media (See Figure 4).²² For a terrorist organization, media exposure can generate both money and manpower. Manpower can generate money and commit terrorist acts to garner media attention. Money funds the manpower and can also buy media attention. To be successful, a terrorist organization must properly manage all three elements of the magic triangle.

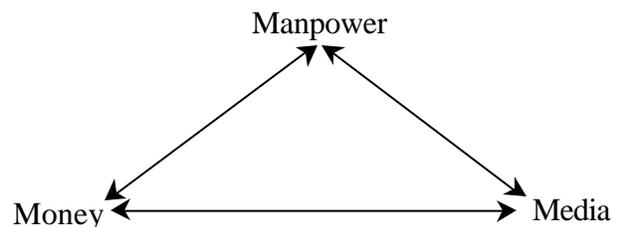


Figure 4 – The Magic Triangle²³

A Terrorist Organization as a System

With this basic background on Warden’s model and terrorist organizations, it is now possible to synthesize this information and develop a five-ring model of a terrorist organization. The results are shown in Table 2.

Leadership	Organic Essentials	Infrastructure	Population	Fighting Mechanism
Terrorist Leaders	Financial network/Money	Training Camps	Active Supporters	Active Cadre/Terrorist Cell
Command and control	Logistics/Supply network	Safe Houses	Passive Supporters	
Political Leadership	Ideology	Transportation Network	Other Population	
Military Leadership	Weapons			
Religious Leaders	Media Publicity			
State Sponsor ²⁴				

Table 2 – Terrorist Organization as a System²⁵

Looking at the leadership ring first, it is evident that there are sometimes several types of leaders found within terrorist organizations, with some organizations having more than one leader performing a different role. Some groups have only one terrorist leader who is responsible for all leadership roles, such as al-Qaida’s Usama bin Laden. Other organizations divide themselves into overt political arms (Sinn Fein) and overt military arms (Irish Republican Army), with each arm having its own leader. Command and control also falls within this ring since it ties leadership to the rest of the organization.

The next ring contains the organic essentials required for the terrorist organization to survive. Within this ring are the organization’s financial resources, which have played a significant role over the last twenty years as terrorism has shifted from state-sponsored groups to major terrorist organizations with large financial networks.²⁶ Also within this ring is the supply network for providing the required weapons for terrorist activities (guns, bombs, etc.). Ideology falls within the organic essentials ring since it is the motivation

behind the terrorists, whether it is political, religious, or financial gain. Finally, media plays a key role in terrorism since media exposure can lead to more money and more supporters.²⁷

The infrastructure ring for a terrorist organization encompasses training camps, safe houses, and transportation networks. Training camps play a critical role in converting supporters into either members of the active cadre. Safe houses are where terrorists plan for future clandestine activities in relative security and seek refuge when required.²⁸ Secure transportation networks are required to move leaders, terrorists, and weapons.

The population ring is where both the active and passive supporters operate. The active supporters provide services, funding, and support. The passive supporters provide a favorable political climate for the terrorist group to operate in. The importance of the supporters cannot be understated. Research by Yoseff Bodansky, director of the congressional Task Force on Terrorism and Unconventional Warfare, has shown it takes 35 to 50 support people to keep a single terrorist operating in the field.²⁹ The group of “Other population” represents potential future active and passive supporters for the terrorists since much of the media attention the organization desires is aimed at influencing their opinion.

The final ring contains the fighting mechanism of the terrorist organization. This group is comprised of the cells of active cadre dedicated to committing terrorist acts. Although terrorist cells are typically only used in offensive terrorist attacks, recent operations in Afghanistan have shown that the al-Qaida terrorists fought alongside Taliban forces.

CHAPTER 3

ATTACKING THE TERRORIST ORGANIZATION AS A SYSTEM

Without a general theory or even a general consensus of what terrorism is, the task of organizing government and even private resources to combat it is intimidating.

David E. Long³⁰

Unleashing Warden's Five-Ring Model

Once critical vulnerabilities have been determined by using the five-ring model, the decision on how to attack or put pressure on those vulnerabilities must be made. Before those decisions are made though, a few issues must be considered.

First and foremost, whatever course of action is chosen, it should comply with the four stated United States terrorist policy tenets:

- First, make no concession to terrorists and strike no deals.
- Second, bring terrorists to justice for their crimes.
- Third, isolate and apply pressure on states that sponsor terrorism to force them to change their behavior.
- Fourth, bolster the counterterrorist capabilities of those countries that work with the United States and require assistance.³¹

Next is the issue of expanding the Warden model beyond its traditional scope. As stated earlier, Warden's model has been limited to lethal airpower applications over the past decade.³² However, to fully realize the potential of the five-ring model, all forms of national power, including nonlethal forms, must be considered for application against the terrorist's critical vulnerabilities. For example, while using lethal force against a terrorist camp may be effective, nonlethal forms of pressure may be more appropriate when targeting critical

vulnerabilities in the population ring. Additionally, attacking a terrorist organization's financial assets may be better accomplished by the Treasury Department than a B-2 bomber. While some of these actions may appear to fall outside the scope of the five-ring model, they actually align perfectly with Warden's viewpoint of strategic warfare:

Fighting is not the essence of war, nor even a desirable part of it. The real essence is doing what is necessary to make the enemy accept our objectives as his objectives.³³

The final issue deals with the scope of operations against the terrorist organization. Paul Pillar, a former senior counterterrorist official at the Central Intelligence Agency, maintains, "No single approach makes an effective counterterrorist policy. The policy must have several elements."³⁴ Hence, for counterterrorist operations to be successful, they must include simultaneity and depth, or parallel warfare in Warden's terminology, to ensure the terrorist organization has no respite.³⁵

The following analysis of each of the five rings will offer general suggestions and considerations on bringing the various elements of national power (diplomatic, economic, military, and informational) against the identified critical vulnerabilities. Specific details regarding implementation and execution are highly dependent upon the targeted terrorist organization and these details extend beyond the scope of this paper.

Leadership

For Warden, leadership is the most critical ring and all actions are aimed against the mind of the enemy command.³⁶ However, engaging critical vulnerabilities in the leadership ring of a terrorist organization poses some challenging problems since terrorist organizations are secretive by nature. This makes directly targeting a terrorist leader extremely difficult,

whether it is to bring the leader to justice or to eliminate the leader. A perfect example of this difficulty is the ongoing hunt for Usama bin Laden.³⁷

Attacking a terrorist organization's command and control is also complicated by the secretive nature of the groups. Since most terrorist groups are organized into cells that frequently operate autonomously, the cells do not require constant guidance from leadership to conduct operations. Additionally, the information age has created new ways (internet, satellite and cellular telephones, etc.) for terrorist leaders to direct followers.

Despite these difficulties, it is still possible to bring the elements of national power against leaders through a wide course of actions. U.S. diplomats can work with foreign nations to hand over terrorist leaders. Economically, financial assets of the terrorist leader can be frozen or seized and sanctions can be instituted against nations harboring the terrorist leader. Militarily, the leader can be targeted for capture or elimination. Informationally, the opportunity to detect, hack into, monitor, or disrupt the group's command and control scheme can provide numerous benefits that can be realized in all the other rings.

The potential reward of actually targeting leaders can be great. Peru provides some excellent examples of the effect the loss of leadership can have on terrorist groups. In 1992, Peruvian authorities captured Abimael Guzman and other top leaders of the Shining Path and seriously diminished that organization's power.³⁸ In 1997, Peruvian military forces ended a hostage situation with the Tupac Amaru Revolutionary Movement (MRTA) in the Japanese ambassador's residence by conducting a rescue operation. During the raid, the Peruvians killed several of the MRTA's most able operational leaders.³⁹ Without their capable leaders, the group's activities have dropped off significantly.⁴⁰

While targeting a terrorist organization's leadership ring may be difficult, every effort should be made to impact the critical vulnerabilities within this ring. As evidenced in Peru, eliminating a terrorist organization's leadership can have lasting ramifications on the overall capabilities of the entire organization. If direct attack is not possible against the leadership, then indirect pressure must be applied by a concentrated effort against the critical vulnerabilities in the outer rings.

Organic Essentials

Terrorists have three basic operational necessities: intelligence to plan and carry out attacks, a logistical network to supply terrorists, and a support network to provide for the terrorists.⁴¹ Of these three necessities, both the logistics and the financial part of the support network fall within the organic essentials ring. Therefore, attacking these critical vulnerabilities can have a tremendous impact on the operations of the terrorist organization.

With the mass proliferation of weapons today, combined with the ability to construct devastating bombs at home, it may be impossible to effectively prevent terrorists from obtaining the supplies they desire. However, this remains a critical vulnerability because terrorists must conduct transactions to obtain their weaponry and these transactions make the terrorists visible to intelligence gathering sources. Properly focusing our intelligence assets to watch for these transactions may expose other parts of the terrorist organization and make them susceptible to attack.

Money, as one of the elements of the magic triangle (see Figure 4), is crucial to the survival of the terrorist group and should be considered a high priority counterterrorism effort. Since September 11, the U.S. government has created three new organizations to

combat terrorist financial assets and has led the worldwide effort to block \$79.9 million in assets of terrorist organizations.⁴² According to James Adams's research, "...to survive, terrorist groups need to cross an economic divide...All those groups which have come and gone in the last twenty years have failed to cross that divide."⁴³

Media, another element of the magic triangle, is also a part of the organic essentials. Terrorists will exploit information operations as much as the media will allow.⁴⁴ While it is not possible to prevent media from covering terrorist activities, U.S. government agencies need to wage their own information operations and attempt to prevent the terrorists from gaining additional supporters or funding. One possible area this could be accomplished is debunking the group's ideology in the media. Additional research by James Adams has shown many notable terrorist groups that arose in the 1960s and 1970s (Baader-Meinhof, Japanese Red Army, and Symbionese Liberation Army) ultimately faded away due to their inability "...to attract the level of popular support they had expected."⁴⁵

Infrastructure

While most terrorist organizations have a minimal amount of infrastructure, the little they do possess is extremely valuable to them because of the functions they perform. Training camps, safe houses, and transportation networks can all be attacked by the military, law enforcement, or even diplomatically.

Pressuring the infrastructure keeps the terrorist organization off balance by disrupting the training of new recruits and depriving the terrorists of safe havens from which attacks can be made. While it might not be possible to eliminate every safe house in the world, the active search for these locations forces terrorists into a defensive operating mode. If

terrorists remain on the defensive and are unable to commit terrorist acts, then the organization receives little media attention and the other two elements of the magic triangle suffer.

Population

Although Warden admits it is difficult to directly attack the population, he does address the potential effectiveness of indirect attacks on the population.⁴⁶ Due to the obvious moral implications of bombing innocent civilians, indirect attacks would be the preferred method employed against a terrorist organization's population ring.

The most important vulnerabilities in the population ring are the passive supporters and other population. These groups are the intended audience for the terrorists and represent the future welfare of the terrorist organization. Should these groups turn against the organization, the terrorists may be forced to relocate or discontinue operations.

Humanitarian and economic assistance are two ways to engage these groups of people on positive terms for the United States. U.S. troops currently deployed to the Philippines will be doing more than aid the Philippine military in their struggle against the Abu Sayyaf organization. The military will also be actively involved in civic projects on the remote islands that Abu Sayyaf operates from in an effort to win the trust of the Muslim residents.⁴⁷

Additionally, providing humanitarian and economic assistance in a country that presents a favorable environment for a terrorist organization may prevent the terrorists from being able to operate in that country.⁴⁸ Media also plays a large role and as discussed earlier, the U.S. must conduct culturally sensitive information operations to provide the truth to these groups of people.

Active supporters of terrorist organizations are best dealt with by law enforcement agencies (see Fighting Mechanism for discussion). These people should be actively pursued since terrorist organizations cannot survive without their support.

Fighting Mechanism

Warden's viewpoint on the fifth ring is that the fighting mechanism (fielded forces) is only a "means to an end" and therefore should be bypassed for more favorable targets in one of the inner rings if at all possible.⁴⁹ He does concede, "... it is sometimes appropriate to concentrate against the fifth ring."⁵⁰ With each terrorist representing a potential attack against the American people or her allies, terrorism is certainly a situation in which it is appropriate to target the fifth ring.

Targeting the fifth ring is complicated due to the secretive nature and global nature of terrorist organizations. Therefore the pursuit of terrorists and terrorist cells requires an intense interagency effort. Some of the primary agencies involved should be the Federal Bureau of Investigations, Immigration and Naturalization Service, Drug Enforcement Agency, Central Intelligence Agency, Department of Defense, and the State Department.

Except in situations like the current war in Afghanistan, operations against the fifth ring will normally be performed by law enforcement agencies. To aid these operations, diplomatic efforts aimed at the extradition of terrorists and the development of intelligence-sharing agreements are required. Additionally, robust antiterrorism measures, aimed at detecting possible terrorist attacks, can lead to effective counterterrorism operations against terrorist cells.

CHAPTER 4

COUNTERARGUMENTS

...we may conclude that critics of the five rings may be more like mosquitoes nibbling at the neck of history than anything else. I say this while acknowledging that I am too a critic....

Colonel Richard Szafranski, USAF⁵¹

The major criticisms made about Warden's five-ring model fall into four distinct categories. The first criticism claims the five-ring model is nothing more than unabashed advocacy for airpower. The second category of criticism asserts Warden's model doesn't take into account the reactive nature of war, while the third major criticism alleges the model is unable to cope with organizations that are not industrialized. Finally, the fourth criticism of the five-ring model is that it is nothing more than unproven ideas tied together by unfounded logic, consequently making it invalid.

Without a doubt, Colonel Warden is a believer in airpower. So, the first criticism may have ringed true when Warden first introduced his five-ring model in "Employing Air Power in the Twenty-First Century." However, Warden removed the airpower advocacy verbiage from "The Enemy as a System," dealt strictly with the concepts of strategic warfare and parallel attack, and made it more than just an airpower model. Therefore, regardless of Warden's personal preference for airpower, what matters is the five-ring model stands on its own merits and can be an effective tool to combat a terrorist organization.

The second criticism claims the five-ring model doesn't take into account the enemy's reactions, and thereby ignores the reactive nature of war.⁵² To make this claim, one

must deny counteraction on the part of the five-ring model to the enemy's reactions. Since planning is an ongoing function, planners would continuously apply the five-ring model to the terrorist organization to account for any changes. This criticism is unfair and invalid.

The third criticism of Warden's five-rings says that the model is "illogical or at least impractical for nontrinitarian warfare."⁵³ Richard Szafranski goes on to say while it may be possible to differentiate the component parts of a terrorist group, the "five rings of terrorist and insurgent organization are exceedingly difficult for the air campaign planner to target."⁵⁴ This criticism would be valid if only airpower was being considered to combat the terrorist organization. However, since the combined efforts of all elements of national power makes it possible to target most aspects of the terrorist organization, this criticism is not applicable.

The final criticism against the five-rings is that the model is based on principled belief and not based on logic. Lewis Ware states:

A perception of the enemy as organized in a system of five rings...is clearly an inadequate analytical instrument...Its arguments rest on principled belief rather than on reason, and principled belief—however powerful or well intended—is by definition not susceptible to rational explanation.⁵⁵

This may be a valid criticism, but only if you care about the science behind how the model was developed and not the results the model can produce when properly applied. Since warfare is often times more art than science, it may be necessary to accept the five-ring model as a work of operational art. Even Richard Szafranski, a noted critic of the five-rings, has written of the model, "Its imperfection does not erase its utility."⁵⁶

CHAPTER 5

CONCLUSION

Ours will be a broad campaign, fought on many fronts. It's a campaign that will be waged by day and by night, in the light and in the shadow, in battles you will see and battles you won't see. It's a campaign waged by soldiers and sailors, Marines and airmen; and also by FBI agents and law enforcement officials and diplomats and intelligence officers.

President George Bush⁵⁷

Fighting terrorism is unlike any war the United States has ever been involved in and will demand the concerted effort of all of our nation's resources to prevail. During this War on Terrorism, all the elements of national power will be on the frontlines battling terrorism. Focusing such a massive effort is critical for operational success.

Warden's five-ring model can provide the proper focus. As demonstrated in this paper, Warden's model is about strategic warfare against an enemy system, and is not just a checklist for creating a target list for the Joint Forces Air Component Commander. Warden's system-based approach can accurately model a terrorist organization and identify the group's critical vulnerabilities. Once identified, all the elements of national power can then be brought against those critical vulnerabilities.

While leadership has always been the focal point for Warden's model, the secretive nature of terrorists requires simultaneity and depth be employed in operations against their organization. Unleashing Warden's model and applying pressure across all five rings will ensure the terrorists remain on the run and have no respite. This is why Warden's five-ring model is a valuable tool in the War on Terrorism.

Terrorism is an extremely complex topic and during the course of writing this paper, several areas for possible future research were revealed. First, the implications of applying Warden's five-rings on the United States in an attempt to identify antiterrorism requirements may yield interesting results. Second, since the War on Terrorism relies heavily on interagency cooperation, it provides fertile ground for examining methods to improve interagency cooperation and investigating the feasibility of establishing a new position to direct the CT and AT efforts within a geographic region. This person could be the individual responsible for coordinating and implementing the plan developed from a five-ring model analysis of the targeted terrorist organization. Finally, the CT potential of each service should be closely examined to determine current levels of readiness and possibly discover new capabilities the military can bring to the table.

NOTES

¹ George W. Bush, “President Bush meets with National Security Team” (remarks by the President In Photo Opportunity with the National Security Team, 12 September 2001), Whitehouse.gov website; available from www.whitehouse.gov/news/releases/2001/09/20010912-4.html; Internet.

² Paul A. Pillar, Terrorism and U.S. Foreign Policy, (Washington, DC: The Brookings Institution, 2001), 32-33.

³ John A. Warden, III., “The Enemy as a System,” Airpower Journal, 9, no. 1 (spring 1995): 44.

⁴ Joint Chiefs of Staff, Joint Doctrine for Military Operations Other Than War, Joint Pub 3-07 (Washington, DC: 16 June 1995), III-2.

⁵ Carl von Clausewitz, On War, ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976; Princeton Paperback, 1989), 75.

⁶ Warden, 52 and 44.

⁷ John A. Warden, III., “Air Theory for the Twenty-first Century”, Aerospace Power Chronicles, [journal on-line]; available from <http://www.airpower.maxwell.af.mil/airchronicles/battle/chp4.html>; Internet.

⁸ Warden, “The Enemy as a System,” 44.

⁹ Warden’s parallel attack is synonymous with the joint concepts of simultaneity and depth. Warden, “Air Theory for the Twenty-first Century,” Internet.

¹⁰ Ibid.

¹¹ Joint Chiefs of Staff, Joint Tactics, Techniques, and Procedures for Antiterrorism, Joint Pub 3-07.2 (Washington, DC: 17 March 1998), II-7.

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid, II-8.

¹⁵ Jonathon R. White, Terrorism: An Introduction, (Stamford: Wadsworth, 2002), 36.

¹⁶ Ibid, 37.

¹⁷ Anthony M. Burton, Urban Terrorism: Theory, Practice, and Response, (New York: Free Press, 1976), 70-72.

¹⁸ Joint Chiefs of Staff, Joint Tactics, Techniques, and Procedures for Antiterrorism, Joint Pub 3-07.2, II-6.

¹⁹ White, 37.

²⁰ White, 38.

²¹ James Fraser and Ian Fulton, Terrorism Counteraction, FC-100-37, (Fort Leavenworth: U.S. Army Command, 1984).

²² Frank A. Bolz, Jr., Kenneth J. Dudonis, and David P. Schulz, The Counter-Terrorism Handbook: Tactics, Procedures and Techniques, (New York: Elsevier, 1990), 50.

²³ Ibid.

²⁴ While the topic of state sponsored terrorism lies beyond the scope of this paper, the United States may apply joint warfare against the state sponsor. If so, then the five-ring model could also be applied to the state sponsoring the terrorism.

²⁵ Table was developed from author's own understanding of terrorism in combination with a table appearing in an unpublished paper. The table from the unpublished paper was developed from interviews conducted by the author with John Warden. Mark S. McAlpine, "Future Roles of Air and Space Power in Combatting Terrorism," (Unpublished Research Paper, Air Command and Staff College, Maxwell AFB, AL: 1997), 13-14; available from <http://papers.maxwell.af.mil/projects/ay1997/acsc/97-0393.pdf>; Internet.

²⁶ James Adams, The Financing of Terror, (New York: Simon and Schuster, 1986), 2.

²⁷ Bolz, Dudonis, and Schulz, 50.

²⁸ Joint Chiefs of Staff, Department of Defense Dictionary of Military and Related Terms, Joint Pub 1-02, (Washington, DC: 12 April 2001), 373.

²⁹ Yoseff Bodansky, Bin Laden: The Man Who Declared War on America, (Rocklin: Forum, 1986), 39.

³⁰ David E. Long, The Anatomy of Terrorism (New York: Free Press, 1990) x.

³¹ Department of State, Patterns of Global Terrorism – 2000, (Washington DC: 2001); available from <http://www.state.gov/s/ct/rls/pgtrpt/2000/>; Internet.

³² Warden's five-ring model may be difficult to "unleash" due to the controversy surrounding the model. Controversial since the model was first published almost a decade ago, its acceptance within the United States military has been limited primarily due to the perceived unbalanced role of airpower in the model. With Warden making bold statements in his original article (John A. Warden, III., "Employing Air Power in the Twenty-First Century," The Future of Airpower in the Aftermath of the Gulf War, ed. Richard H. Schultz, Jr. and Robert L. Pfaltzgraf, (Maxwell AFB, AL: Air University Press, 1992), 57-82) such as "The world...has seen the awesome power of the air offensive—and the near impossibility of defending against it" and "We have moved from the age of the horse and sail through the age of the battleship and tank to the age of the airplane", it is understandable how other services tend to look unfavorably upon a model which appears to advocate only the air component. However, three years after his original article Warden published his definitive writings on the subject ("The Enemy as a System"). In this article, Warden drops the airpower advocacy rhetoric and makes an unrestrained call for strategic warfare (not just aerial warfare) against the enemy. As technology improves, service doctrines evolve, and our understanding of producing strategic effects with more than just the military and airpower expands, the possibility of engaging enemies with all the elements of national power becomes a reality and we can then conduct what Warden terms hyperwar.

³³ Warden, "The Enemy as a System," 55.

³⁴ Pillar, 29. Mr. Pillar goes on to suggest that the four fronts that terrorism can be addressed include root conditions, capabilities, intentions, and defenses.

³⁵ Simultaneity and depth are what Warden refers to as parallel attack. For more information regarding simultaneity and depth, see Joint Chiefs of Staff, Joint Doctrine Encyclopedia, (Washington, DC: 16 July 1997), 637-638.

³⁶ Warden, “The Enemy as a System,” 49.

³⁷ See Romesh Ratnesar, “The Hunt for Osama bin Laden”, Time, 158, no. 23 (26 November 2001); [periodical on-line], Time.com, available from <http://www.time.com/time/nation/article/0,8599,184958,00.html>; Internet and Barton Gellman, “The Covert Hunt for bin Laden”, Washington Post, 19 December 2001, section A, page 1; [newspaper on-line], Washingtonpost.com, available from <http://www.washingtonpost.com/wp-dyn/articles/A62725-2001Dec18.html>; Internet

³⁸ Department of State, Appendix B

³⁹ Pillar, 33.

⁴⁰ Department of State, Appendix B.

⁴¹ White, 39.

⁴² Data is from White House website (<http://www.whitehouse.gov/response/financialresponse.html>). The three organizations created are the Foreign Terrorist Asset Tracking Center (FTAT), Operation Green Quest, and the Terrorist Financing Task Force. These organizations facilitate information sharing between intelligence and law enforcement agencies and encourage other countries to identify, disrupt, and defeat terrorist financing networks.

⁴³ Adams, 237.

⁴⁴ Joint Chiefs of Staff, Joint Tactics, Techniques, and Procedures for Antiterrorism, Joint Pub 3-07.2, II-1.

⁴⁵ Adams, 237.

⁴⁶ Warden, “The Enemy as a System,” 50.

⁴⁷ Paul Wiseman, “In Philippines, Electricity is Anti-Terror Tool,” USA Today, 28 January 2002, 9; [newspaper on-line]; Usatoday.com, available from <http://www.usatoday.com/news/world/2002/01/28/usat-philippines.htm>

⁴⁸ See Yael Shahar, “Tracing bin Laden’s Money: Easier Said Than Done,” The International Policy Institute for Counter-Terrorism; available from <http://www.ict.org.il/articles/articledet.cfm?articleid=387>; Internet. In this article, the author explains how bin Laden earned himself the status of state benefactor and protected person in Sudan by building numerous businesses in Sudan (construction company, bank, and farms). Had the U.S. provided economic aid or sent wealthy Muslim-Americans to the Sudan to open businesses, it might have been possible for the U.S. to gain favor and influence the Sudanese government in the same way bin Laden did. Such influence may have prevented bin Laden from establishing his organization there. Possibilities like this require a thorough re-evaluation of U.S. engagement policies regarding failed or failing nations in an attempt to prevent terrorist organizations from finding safe haven within an entire nation like Sudan or Afghanistan.

⁴⁹ Warden, “The Enemy as a System,” 51-52.

⁵⁰ Ibid, 54.

⁵¹ Richard Szafranski, "The Problems with Bees and Bombs," *Airpower Journal*, 9, no. 4 (winter 1995): 95.

⁵² Richard Szafranski, "Parallel War and Hyperwar: Is Every War a Weakness?" *Aerospace Power Chronicles*, [journal online]; available from <http://www.airpower.maxwell.af.mil/airchronicles/battle/chp5.html>; Internet. The specific criticism made is that "Rigid adherence to an air campaign plan specifying a series of parallel attacks in advance is rigid adherence to a set of attacks designed against the initial organism, not the evolved one. The danger with a wonderfully deterministic air campaign plan is that it may adapt poorly to an organism that evolves in unexpected ways."

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Lewis Ware, "Ware on Warden: Some Observations of the Enemy as a System," *Airpower Journal*, 9, no. 4 (winter 1995): 92.

⁵⁶ Szafranski, "The Problems with Bees and Bombs," 97.

⁵⁷ George W. Bush, "Remarks by President George Bush." (remarks made at the California Business Association Breakfast, Sacramento Memorial Auditorium, Sacramento, California. 17 October 2001); Whitehouse.gov website, available from <http://www.whitehouse.gov/response/text/faq-what.html>; Internet.

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