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## **Foreword**

A quick look at the history of the United States Navy and its performance at the tactical, operational, and strategic levels readily suggest that informed decisionmaking lies at the crux of our military effectiveness. We are now deeply enmeshed in operational environments that require information dominance but are characterized by uncertainty, near-peer threats, and circumstances where unconventional is the new normal. Our force daily faces new challenges and opportunities that demand heightened scrutiny. The diversity of these new challenges mandates a proactive and persistent review of tactics, procedures, and processes if we are to remain dominant on the world's oceans. How the commander defines the problem, ensures assumptions are challenged, considers the adversary's perspective, and avoids common planning pitfalls are processes that carry equal importance to the obvious materiel preparation for war. "Red teaming" is this very important activity of challenging the commander by providing alternatives through critical thinking and is a relatively simple, but sure method, by which to improve decisionmaking.

Various red teaming ideas and literature exist across the Services, the Intelligence Community, industry, and others; however, this information is not packaged for our Navy decision makers. For the maritime commander wishing to employ this capability to better shape his decision-making processes, navigating this disparate arrangement of material may prove difficult and very time consuming. The *Maritime Commander's Red Team Handbook* seeks to distill this information and provide a useful compass for the Navy commander in understanding the role of red teaming, the potential benefit, and the basic steps by which to establish a red team. When properly employed, the red team will challenge assumptions, provide diverse insight, support the planning process, better synchronize operations, and improve effects through enhanced decisionmaking.

WENDI B. CARPENTER RADM USN

## Introduction

Red teaming, as a concept, is neither new, nor revolutionary, and it is the intent

of this handbook to provide guidance to the maritime commander on establishing and employing this oft-confusing and misunderstood capability. Throughout history, prudent United States Navy commanders relied upon trusted advisors to define complex problems, diagnose the efficacy of their organization, prescribe



Officers confer aboard USS Colorado, 1871

solutions to achieve a desired goal, and challenge assumptions. Often personally selected, these advisors provided private, not-for-attribution, unvarnished advice directly to the commander. Believing in dissonance as the truest form of loyalty, these advisors spoke truth to power even when disagreement with their commander could cost censure, rebuke, or dismissal. The best advisors, recognized and appreciated as the commander's most valuable asset, performed a great service and were often the unrecognized midwife to history's greatest events. Many of military history's greatest blunders are similar in one unfortunate aspect—failure by the commander to consider well-reasoned advice.

As the operating environment became more complex due to geographic, cultural, social, economic, political, and legal factors, organizations responsible for national security became more administratively complicated. The commander's advisors became formal staff officers segregated into functional areas. Layers of bureaucracy stratified to support increasing administrative requirements. In theory, large staff organizations protected commanders from catastrophic failure. However, in practice, large staff organizations prevented commanders from realizing advantage from unanticipated opportunity. Surrounded by gate keepers, sycophants, and a risk averse hierarchical command structure, the contemporary commander may not receive the best and most comprehensive advice.

The red teaming concept is the most recent attempt to solve this problem. "Red teaming-like" organizations existed within the national security community for decades: OPNAV's Deep Blue, the U.S. Air Force's Checkmate, and the Office of the Secretary of Defense's Office of Net Assessment are examples. Red teams help the commander identify when staffs make poor assumptions and fail to account for the complexity of the operational environment. The tragedy of 11 September 2001, the invasion of Iraq, and a myriad of intelligence and operational failures caused the national security community to reconsider how decisions are made. In September 2003, the Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics commissioned the Defense Science Board to report on the role and status of Department of Defense (DOD) red teaming. The board concluded:

"We believe red teaming is especially important now...Aggressive red teams challenge emerging operational concepts in order to discover weaknesses before real adversaries do. Red teaming also tempers the complacency that often follows success."

In response to the widely recognized need for alternative analysis, red teams are now found within the Intelligence Community, combatant commands, Service headquarters, and several Service component and tactical commands. Despite the invaluable service that red teaming provides, this capability has yet to be broadly adopted across the U.S. Navy. This handbook is a ready resource to the maritime commander in integrating red teaming into his decision-making process. This handbook is not doctrine, but is rather a guide to aid in the understanding of red teaming, why it is crucial to a maritime commander's decision cycle, and what is required of leadership to stand up a red teaming capability and foster a climate where it can succeed.

The red teaming community is relatively small, and, as such, there is a narrow body of red teaming literature and references available to those interested in this service. Navy Warfare Development Command (NWDC) has tailored this information to the maritime commander. This handbook draws from a number of

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Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics, Defense Science Board Task Force, *The Role and Status of DOD Red Teaming Activities*, September 2003, preface.

sources, and NWDC would like to recognize the contributions from the following organizations in particular:

- · Army Directed Studies Office
- Commandant Marine Corps Red Team
- Defense Adaptive Red Team
- Defense Intelligence Operations Coordination Center Red Team
- Defense Science Board Task Force
- Naval Postgraduate School
- University of Foreign Military and Cultural Studies
- United Kingdom Development, Concepts, and Doctrine Centre

## **Chapter 1**

## Red Teaming 101

## What is Red Teaming?

Many ideas exist concerning red teaming, and views vary on how to conduct red teaming and what a red team should do. Many terms exist to describe these perspectives and their application, i.e. red teaming, devil's advocacy, alternative analysis, team A/team B, threat emulation, analytical techniques, and vulnerability assessments. Common to all descriptions of red teaming is the requirement to challenge the organization to improve decisionmaking by providing alternatives through critical thinking.

The Defense Intelligence Operations Coordination Center defines red teaming as:

"An independent capability to challenge and explore alternatives in operational concepts, organizational constructs, planning assumptions, and assessments from the perspectives of partners, adversaries, and others to improve decisionmaking and planning."<sup>2</sup>

Red teaming serves to hedge against surprise, particularly catastrophic surprise. It is important to understand that red teaming will not prevent surprise, as this unfavorable quality is inherent in the current maritime environment dominated by chance, ambiguity, and uncertainty. Red teaming can, however, prepare the Navy to deal with surprise. In particular, it can create a mental framework that is prepared for the unexpected, and it is the skillful, intelligent adaptation to the current maritime operating environment that best leads to victory, whether in plans, negotiations, or war.

Red teaming can be used at all levels of war. For example, at the strategic level, assumptions and paradigms should be challenged. At the operational level, red teams can analyze fleet force postures and war plans. Finally, at the tactical level, red teaming finds a niche in challenging squadrons and units in developing robust courses of action (COAs) for training programs or tactical maneuvers. Although the principles and ideas presented in this handbook

Defense Intelligence Operations Coordination Center, Red Team Concept of Operations, December 2007, p. 5.

can be applied to any red teaming project, this handbook will focus on red teaming at the operational and strategic level.

## Why Red Team?

"In some ways it was like the debate of a group of savages as to how to extract a screw from a piece of wood. Accustomed only to nails, they had made one effort to pull out the screw by main force, and now that it had failed they were devising methods of applying more force still, of obtaining more efficient pincers, of using levers and fulcrums so that more men could bring their strength to bear. They could hardly be blamed for not guessing that by rotating the screw it would come out after exertion of far less effort; it would be a notion so different from anything they had ever encountered that they would laugh at the man who suggested it." —C.S. Forester

Lessons learned during combat operations illustrate the importance of continually challenging assumptions, identifying errors in planning, and avoiding patterns during operations. Psychologist Gary Klein describes these efforts to discover weakness in planning as conducting a "pre-mortem analysis" of the operation. As an example, presuppose failure, attempt to envision how failure occurred, and finally, test operational concepts for failure mitigation. During operations, red teams can help the staff identify when they are setting patterns. A press interview of a Somali militia commander who noted the repeated patterns of U.S. forces in Somalia provides a well known case in point:

"If you use one tactic twice, you should not use it a third time, and the Americans already had done basically the same thing six times." 5—Somali militia commander

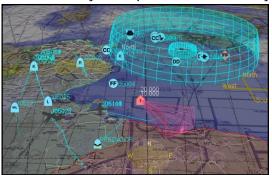
The specific focus of the red team depends upon the commander's requirement and the organization. Within intelligence organizations, the red team primarily focuses on improving the understanding of the adversary. Red teams provide

<sup>&</sup>lt;sup>3</sup> From C.S. Forester's *The General*, describing World War I allied generals trying to figure out a means to break the trench stalemate.

<sup>&</sup>lt;sup>4</sup> Klein, Gary, *The Power of Intuition*, New York: Doubleday, 2003, pp. 98–101.

Karcher, Timothy Major USA, Understanding the "Victory Disease," From the Little Bighorn to Mogadishu and Beyond, Combat Studies Institute Press, Fort Leavenworth, Kansas.

alternative analysis, help ensure the adversary is appropriately portrayed in any



wargames, and improve intelligence synchronization with operations. Within the operational fleet, red teams improve decisionmaking in planning and operations by broadening the understanding of the operational environment from alternative perspectives and identifying gaps,

vulnerabilities, and opportunities. At higher echelons, the duties of the red team are more varied.

For those involved in "futures" and combat developments, red teams help the staff ensure the concept or experiment accurately reflects the variables in the future operational environment. It is at this strategic level that red teaming helps the commander avoid winning battles and losing wars, yet it is here where red teaming has been the least used; and even when used, its results have, more often than not, been rejected or disregarded by policy makers.<sup>6</sup> Red teaming should be used to examine the possible ramifications of either strategic or operational moves on potential opponents.

Even considering these benefits, red teaming the highest level strategic decisions of the Navy will likely encounter some pushback, because if done well, red teaming will ultimately challenge the assumptions and decisions of admirals. It is the duty of the maritime commander to withstand these challenges without executing the messenger. Red teaming is the only method that can assure assumptions and preconceived notions receive the test they deserve.<sup>7</sup>

#### What Makes an Effective Red Team?

The following practices and attributes are offered as basic ingredients of successful red teaming:

 Command culture. Red teaming thrives in an environment that not only tolerates, but values internal criticism and challenge. It is essential that red

Murray, Williamson, Thoughts on Red Teaming, p. 22.

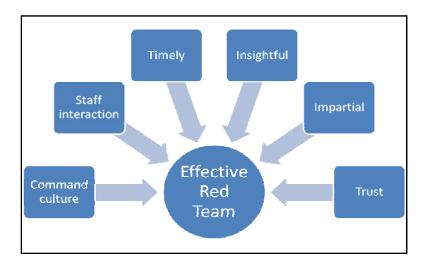
<sup>&</sup>lt;sup>7</sup> Murray, Williamson, *Thoughts on Red Teaming*, p. 23.

teamers have the ability to present their findings in an objective manner without provoking confrontation. This attribute of a tolerant command culture is also labeled "top cover," and it is needed to ensure that the red team's products not only have the requisite degree of independence, but are seriously considered as well.<sup>8</sup>

- Staff interaction. Robust interaction between the red team and the commander's planning staff is necessary to ensure the staff walks away with rigorous solutions and a greater appreciation and understanding of the issues that the commander faces.
- Timely. Red teams should be integrated into planning efforts early enough to contribute effectively to initial stages of decisionmaking. They should be put in place before major problems arise and before major resource expenditure.
- Insightful. Red teams should demonstrate a deep understanding of the adversaries' and others' cultures, perceptions, motivations, objectives, incentives, and human factors.<sup>9</sup>
- Impartial. Red teams need to possess great courage and integrity to avoid telling the commander what they think he wants to hear. They should not be vested in methods, processes, outcomes, and the problems or issues being analyzed.
- Trust. Trust between the red team and the commander is a must. Regular and frequent access to the principal is one of the most important aspects of red teaming.

Defense Intelligence Operations Coordination Center, Red Team Concept of Operations, December 2007, p. 5.

Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics, Defense Science Board Task Force on *The Role and Status of DOD Red Teaming Activities*, September 2003, p. 6.



## **Red Team Composition**

The red team must be comprised of expert and experienced staff. Recognizing that manning and the increasing demands placed on reduced resources are concerns across the Navy, the below is a skeleton proposal for staffing a red team that minimizes burdens to the commander's personnel. Personnel are not removed from their standing roles on the commander's staff. These personnel are not "lost" from the staff but are "on-call" as the commander directs a red team to analyze important decisions, plans, or processes. Ideally, red teams are always operating and examining even routine decisions and plans, but it is acknowledged that this may not be practical, or even possible.

• Red Team Leader (RTL). Truly the only "on paper" required command designee, the commander should appoint a permanent RTL with appropriate leadership skills, experience, and knowledge to lead red team activities. The RTL is responsible for all aspects of red team operations and ensures that the results of the red team's analysis have been properly conveyed to the commander. The RTL should be delegated requisite authority to conduct red team activities unhindered and must have a direct line of communication to the commander. Likely sources from which to draw the RTL would be from the N2, N3, or N5, but it is more important to select the right individual than to source him from a particular office.

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Defense Intelligence Operations Coordination Center, Red Team Concept of Operations, December 2007, p. 7.

- Permanent red team members. The commander should appoint additional standing members to serve on the red team. This may be only two or three personnel. At a minimum, a deputy RTL should be appointed to stand in for the RTL as required and assist the RTL in arranging for ad hoc red team membership. The commander should consider any combination of military personnel, government civilians, or contractors as permanent members.
- Ad hoc red team members. Additional personnel often supplement the
  permanent red team as the situation and subject matter of the problem or
  issue at hand dictates. Ad hoc members may be sourced from within the
  DOD, other elements of government, non-governmental organizations,
  academia, and the private sector.

## Chapter 2

## **Applying Red Teaming**

Red teaming is best viewed as a toolset comprised of varied analytical techniques that can be applied to a range of situations. Nearly all red team activities have either an intelligence or planning and operations focus. The red team seeks to either improve the understanding of the enemy or improve decisionmaking. Often these two focuses are melded together with the intent to provide unbiased decision support by synchronizing intelligence and operations.

## **Challenging Assumptions**

In 2006, in response to Iraqi intelligence failures, U.S. Air Force General Michael Hayden, serving as the Deputy Director of National Intelligence, stated, "We just took too much for granted. We didn't challenge our basic assumptions."

Joint Publication 1-02, *DOD Dictionary of Military and Associated Terms*, defines an assumption as "a supposition on the current situation or a presupposition on the future course of events, either or both assumed to be true in the absence of positive proof, necessary to enable the commander in the process of planning to complete an estimate of the situation and make a decision on the course of action."

The bread and butter of any fleet commander's red team should be its ability to identify and challenge these underpinning assumptions and offer alternatives as appropriate. Good assumptions support good decisionmaking and problem solving. Conversely, if assumptions are unsupportable or based on faulty reasoning or knowledge, they can result in poor decisionmaking and problem solving. Where lack of information or intelligence creates less rigorous assumptions, the red team may provide alternative views of the environment to allow the staff to consider flexible options in the event of unforeseen developments.

In addition, a red team's real value may be to discover and evaluate assumptions made during planning that are not explicitly stated or included in the plan. These implicit, hidden assumptions can sabotage the success of a plan from the onset.

#### **Assessment**

Intrinsically linked to planning, an effective assessment system provides commanders and staffs a gauge on whether the mission is being accomplished. Proper assessment provides measures of effectiveness that can indicate where adjustments to plans may be required.

The red team assists the commander in the assessment process by:11

- · Helping the staff determine if they are assessing the right things.
- Providing independent critical reviews of the assessment process to determine if adequate assessment resources and procedures are in place.
- Aiding the staff in accounting for partners' perspectives which shape the assessment process and measures.
- Exploring how the adversary might assess their own operations which may provide clues as to enemy COAs.
- Helping to ensure our measures of effectiveness measure what is important to the adversary.

## **Support to the Navy Planning Process**

Navy planning is the process by which a commander visualizes an end state and then determines the most effective ways by which to reach that end state. Proper planning is essential to the commander because it aids in handling the complexities in the operational environment and the numerous uncertainties inherent in warfare. The goal of red teaming as part of the planning process is to help to explore alternatives, realize opportunities, and identify vulnerabilities and threats in order to ensure robust courses of action.

The following are general rules of thumb for red team involvement in planning: 12

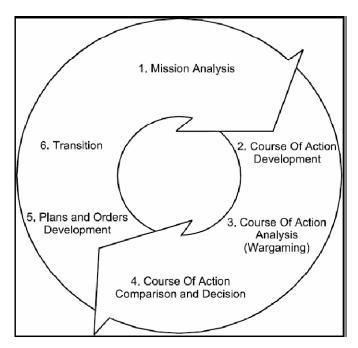
- The red team should participate in each phase of the planning process, often without overt intervention and largely remaining in the background.
- The red team should avoid briefing in staff meetings or open forums and limit discussions and recommendations to the lead planner.

University of Foreign Military and Cultural Studies, Red Team Handbook, 7 November 2009, p. 82.

University of Foreign Military and Cultural Studies, Red Team Handbook, 7 November 2009, p. 63.

- The finesse and skills of the red team in persuasion and communication will weigh heavily in determining their effectiveness in the planning process.
- The red team should focus on identifying unseen opportunities, alternatives, gaps and vulnerabilities, and threats to blue COAs.
- Early engagement is paramount as timely red team input to the staff and commander avoids having the planners move backward in the planning sequence.

## **Navy Planning Process Sequence**



This section outlines the major actions that should be completed by the red team in each step of the planning process.<sup>13</sup>

#### Step 1—Mission Analysis

- Assist the staff in the identification of specified, implied, and essential tasks.
- Identify higher headquarters' assumptions and challenge those used by the staff.

University of Foreign Military and Cultural Studies, Red Team Handbook, 7 November 2009, pp. 65-73.

- Identify enemy and U.S./coalition centers of gravity from their perspectives.
- Identify potential end states for adversaries, coalition, and other major stakeholders.
- Identify assumptions on knowledge gaps regarding enemy thought processes, decision-making traditions, and world view.

#### Step 2—COA Development

- Identify potential consequences and second and third order effects of friendly and enemy COAs.
- Challenge proposed assumptions and accurately record all of them.
- Ensure perspectives of the adversaries, partners, and others are realistically captured.

#### Step 3—COA Analysis

- Help staff determine if adequate measures are in place to measure success.
- Monitor wargame to help ensure realistic friendly and enemy capabilities are represented.

#### Step 4—COA Comparison and Decision

 Continue to examine established assumptions and look for new, unstated assumptions.

#### Step 5—Plans/Orders Development

 Conduct a critical review of the order(s) to identify gaps, disconnects, or vulnerabilities to the plan.

#### Step 6—Transition

## **Challenges to Effective Planning**

Many traps can derail the planning process. Red teams assist the commander in critically examining the group's planning and decisionmaking to avoid many of these critical thinking traps. If it is to be effective at all stages of the planning process, the red team should be alert to the challenges outlined below:<sup>14</sup>

- Group think—the desire for solidarity or unanimity within a staff constrains wider, alternative thinking.
- Focus on the current—failure to anticipate or to react to the situation changing.
- Paradigm blindness—a "why change what has worked in the past" attitude leading to predictable actions or failure to recognize changes in adversary actions.
- Trends faith—blind adherence to trends without considering other problems or possible shocks.
- Mirror imaging—applying own attitudes (values, beliefs, cultural concepts, capabilities, etc.) to others, thus gaining a flawed understanding of consequences and outcomes.
- Cultural contempt or misunderstanding—distinct from mirror imaging in that the staff recognize that cultural differences exist but fail to understand their significance or interpret them.
- Over optimism or pessimism—to assume success will be the only outcome, or to be unable to see the route to success.
- Oversimplification and tunnel vision—failure to take a holistic view of a complex problem with many variables, especially when time constrained and operating with poorly integrated coalitions, leading to implicit or untested assumptions.
- Faulty perceptions/mindsets—a tendency to perceive the expected.

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United Kingdom Development, Concepts, and Doctrine Centre, A Guide to Red Teaming, February 2010, pp. 29-30.

## **Chapter 3**

## The Operational Environment

Joint Publication 3-0, *Joint Operations*, defines the operational environment as "the composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. It encompasses physical areas and factors (of the air, land, maritime, and space domains) and the information environment. Included within these are the adversary, friendly, and neutral systems that are relevant to a specific joint operation."

The University of Foreign Military and Cultural Studies recommends the analysis of 13 critical variables to help the red team examine the operational environment in greater fidelity. These variables define the conditions, circumstances, and influences that affect the employment of military force and influence the decisions of the commander.

## **Physical Environment**

The physical environment defines the physical circumstances and conditions

that surround and influence air, land, sea, and space operations. The defining factors are terrain, weather, topography, hydrology, and environmental conditions. The physical environment has always been a key factor in military operations. History demonstrates that forces able to



take advantage of the physical environment have a much higher probability of success. Our opponents understand that less complex and open environments favor the United States. This is due to our standoff technology, precision guided munitions, and sophisticated intelligence, surveillance, and reconnaissance capability. As such, adversaries will seek to use complex terrain and unfavorable weather when confronting U.S. forces.

University of Foreign Military and Cultural Studies, Red Team Handbook, 7 November 2009, pp. 22-28.

## **Nature and Stability of Critical Actors**

This variable refers to the internal cohesiveness of actors. It evaluates the population, economic infrastructures, political processes and authority, military forces, goals, and agendas. It also refers to an actor's strengths or weaknesses. It is important to determine where the real strength of the organization lies. It may be in the political leadership, the military, the police, or some other element of the population. Understanding this variable allows U.S. forces to better visualize the nature of the military campaign and the true aims of a threat's campaign. An entity that must commit significant resources to maintain internal control may represent less of a conventional threat and more of a stability and support threat.

## **Sociological Demographics**

Demographics describe the characteristics of a human population or part of it. Demographics measure the size, growth, density, and distribution. Demographics also measure statistics regarding birth, marriage, disease, and death. Demographics are a significant factor contributing to likelihood of conflict. Perceived inequities among sectors of a population can breed envy and resentment, often resulting in conflict. Overpopulation and an uneducated, unemployed "youth bulge" can aggravate economic, ethnic, religious, and other rivalries.

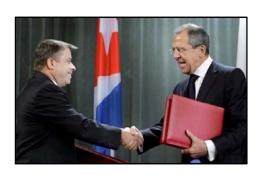
#### **Culture**

Culture is a system of shared beliefs, values, customs, and behaviors that the members of society use to cope with their world and with one another. Understanding a culture requires examining multiple elements, including its core values, history, myths, traditions, and other factors. Cultures transmit their shared values and beliefs from generation to generation through learning and social interaction. Finally, a culture in and of itself does not cause a conflict. The friction that comes from the interaction between two different cultures creates the potential for conflict.

## Regional and Global Relationships

Nation-states or non-state actors often enter into relationships that can be local, regional, or global. These relationships include political, economic, military, or cultural mergers and partnerships. Membership or allegiance to such a

relationship can determine an actor's actions. This can be in terms of support, motivation, and alliances. When actors create alliances, they can add to their



collective capability and broaden the scale of operations and actions. Regional and global relationships of opponents or allies shape the scale, intensity, and perseverance of antagonists in military operations. In the age of globalization, regional activities will undoubtedly draw global interest and potential involvement. Effects created in one

part of the world at the operational or tactical level could have global, cascading outcomes at the strategic level.

## **Military Capabilities**

It was once easy to define military capabilities; however, this variable is rapidly becoming one of the most complex. A commander must be able to visualize all military capabilities of the threat. Red teams must emphasize that enemies can be flexible and adaptive. The commander must have information on conventional and unconventional capabilities, the enemy's ability to use modern technology, and its economic and political ability to affect the mission.

Capabilities include equipment, manpower, training levels, resource constraints, and leadership issues. Niche technologies will be increasingly the norm for the near-term. Hybridization, rapid technological advancement, and asymmetric concepts generate constantly changing requirements and needs. In addition, paramilitary organizations, special forces, or enhanced police organizations take on greater significance as their capabilities and roles expand.

#### Information

Information involves civil and military access, use, manipulation, distribution, and reliance on information technology systems. Various actors seek to use perception management to control how the public sees things. Adversaries will exploit mistakes made by the United States. They will also use propaganda to sway the population to support their cause. Media and other information means make combat operations visible to the world. The media influences U.S. political decisionmaking, internal opinion, and the sensitivities of coalition members.

Developing countries may have little in the way of communications infrastructure. Information may flow by less sophisticated means—couriers, graffiti, rumors, gossip, and local print media. Understanding existing communication infrastructure is important because it ultimately controls the flow of information to the population and the threat.

## **Technology**

Technology reflects the equipment and technological sophistication that an entity could bring to the operational environment. Technology includes what

nations or actors can develop, produce, or import. Global access to technological advances is slowly eroding the United State's advantage. Understanding this variable can determine whether the threat has the technological ability to achieve equality or overmatch the United States in selected areas. The



presence of sophisticated technology can indicate where opponents expect to achieve the greatest advantage or perceive the greatest threat.

## **External Organizations**

A variety of external organizations can be present in a conflict or failed state. These include non-government organizations, international humanitarian organizations, multinational corporations, transnational organizations, and other civilian organizations. The organizations can have stated and hidden interests that assist or hinder U.S. mission accomplishment. Each organizational or individual participant pursues its interests in concert or competition with other entities. These actors may have economic, political, religious, cultural, or private motivations that differ from their public organizational mission statements. Defining these variables should inform the commander of the impact external organizations have on mission accomplishment.

#### **National Will and Will of Critical Actors**

National will encompasses a unification of values, morals, and effort between the population, the leadership or government, and the military. Through this unity, all parties are willing to sacrifice individually for the achievement of the unified goal. The interaction of military actions and political judgments,

conditioned by national will, further defines and limits the achievable objectives of a conflict. This impacts the duration and conditions of termination of a conflict.

The willingness of the people to support their military, paramilitary, terrorists, or insurgencies can be a significant characteristic of the battlefield. It will influence the type and intensity of resistance the people will pose to U.S. military operations. Most countries view the U.S. national will as a U.S. strategic center of gravity. The degree to which one group can attack its opponent's will and still preserve its own represents its ability to set the conditions for achieving favorable conflict resolution. In a world of transparent military operations, attack on and defense of national will have tactical, operational, and strategic implications. A perceived attack on a group's cultural identity will usually serve to bolster its will to fight. This potentially increases both the intensity and duration of a conflict.

#### **Time**

Time is a critical factor and a tool to manipulate tactical, operational, and strategic advantages. It drives the conduct of operations and campaigns. Time is one of the most significant planning factors driving decisionmaking. How much time is available and how long events might take will affect every aspect of military planning. Additionally, using "time" to achieve confusion or delay on the part of an adversary may result in victory by avoiding conflict. Planners need to consider time in the context of the culture that the force is operating. Every culture views time differently. An opponent's view of time might be radically different from ours.

#### **Economics**

The economic variable establishes the boundaries between the "haves" and the "have-nots." This gap of economic differences among nation-states and other actors can cause conflict. Differences may be significant among nation-states, organizations, or groups regarding how they produce, distribute, and consume goods and services. Control and access to natural or strategic resources can cause conflict. The ability to affect another actor through economic, vice military means, may become the key to regional hegemonic status or dominance.

Hall, Wayne, Stray Voltage: War in the Information Age, Annapolis, MD, Naval Institute Press, 2003.

Economic power and the ability to mobilize it represent a nation or actor's ability to rapidly procure, mobilize, and conduct sustained operations. It also reveals external relationships that could result in political or military assistance. For example, potential adversaries understand that the U.S. economy is a center of gravity that is very sensitive to perturbation. American economics and the power that flows from it are inviting targets.

## Religion



Religion is a variable that affects each of the preceding variables. Religion is interwoven with a nation's culture. It can be a cornerstone that affects every aspect of culture. An understanding of the religions practiced in the states and regions that U.S. forces operate in is crucial to our success. This understanding

helps shape the way the United States conducts operations, particularly in guiding the interpersonal relationships between our forces and the population.

## **Summary**

Red team participation is necessary for the development of successful strategy and maritime planning. Red teams provide the historical, ideological, political, and cultural context in which to investigate the complex dynamics of cause-and-effect, including second and third order effects, in response to blue actions. The insights provided by the red team enable the maritime commander to understand the long-term impact of alternative COAs relative to achieving the desired intent. It is clear that effective military organizations—ones which have innovated in times of peace and which have adapted to the real conditions of war—have developed organizational cultures in which the challenging of assumptions is welcomed.<sup>17</sup> Important to Navy effectiveness is a culture that takes the intellectual preparation for war as seriously as the materiel preparation.

Murray, Williamson, Thoughts on Red Teaming, p. 24.

## **NOTES**


GAME

CHANGING

INNOVATIONS



NAVY WARFARE DEVELOPMENT COMMAND 1528 PIERSEY STREET BLDG 0-27 NORFOLK VA 23511-2723