

UNIVERSITY OF
FOREIGN MILITARY
AND
CULTURAL STUDIES

Red Team Handbook

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Introduction

The concept of “Red Teaming” is finding its way into both Joint and Army Doctrine. Commander’s integration and understanding of Red Teaming is evident in the commitment of resources to support decision making. Red Teams are in Combatant Commands’ Joint Intelligence Operations Centers, the Department of the Army and Navy Staff, and from Army Service Component Command to Brigade Combat Team in the US Army. Although the Army pioneered the idea, it is no longer only an Army Concept.

The purpose of this handbook is three fold.

1. It is a first step to develop doctrine for red teaming. There is no intent to enshrine the techniques that follow as doctrine but rather to retain them as tactics, techniques, and procedures.

2. The handbook is a guide and means of instruction for users and an aide memoire for graduates.

3. The Red Team Handbook provides a menu of red team tactics, techniques, and procedures.

Many ideas exist concerning Red Teaming. Views vary on how to conduct Red Teaming and what a Red Team should do. UFMCS defines Red Teaming as a function to avoid groupthink, mirror imaging, cultural missteps, and tunnel vision in plans and operations. Red Teams help identify when staffs make poor assumptions and fail to account for the complexity of the Operational Environment.

Red Teams perform tasks within three focus areas:

- Operations and Planning
- Critical Review and Analysis
- Intelligence

This handbook is not a checklist of actions or tasks, but rather as a compendium of key ideas and information to help facilitate practical application of complex ideas and theory taught in the curriculum. The contents of this handbook are not doctrine or the “school solution.”

This handbook is a living, UNCLASSIFIED document. We welcome your comments, suggestions, and input.

November 2009

Introduction

SECTION I: Red Team Fundamentals and Methodology

Purpose:

This section answers the following questions:

- *Why Red Team?*
- *What is the definition for Red Teaming?*
- *What does the Red Team do?*
- *What is the overall concept for Army Red Teaming?*
- *What are the types of key questions for Red Teams to ask?*

“Red teams and red teaming processes have long been used as tools by the management of both government and commercial enterprises. Their purpose is to reduce an enterprise’s risks and increase its opportunities. ...Red teams are established by an enterprise to challenge aspects of that very enterprise’s plans, programs, assumptions, etc.”

**Defense Science Board
Report on Red Teaming**

Many Perspectives

There are many perspectives of Red Teaming. Business, governmental agencies, laboratories, the Department of Defense, and each of the services have their own unique definition of the concept as well as differing perceptions of how to apply it to their endeavors.¹ In addition, 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 descriptions of Red Teaming is the requirement to challenge the organization by providing alternatives through critical thinking in order to improve decision making and achieve the end state.*

¹ Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics. Defense Science Board Task Force, The Role and Status of DoD Red Teaming Activities, September 2003, page 2.

Why Red Team?

Numerous studies and articles have been written about the need for red teaming. The Defense Science Board completed one of the most authoritative studies in September 2003 and proposed many Red Team tasks. The Defense Science Board Task Force 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.”²*

Studies and reports, both historical and recent, recommend the use of “red teams” to improve intelligence processes and estimates. For example, the March 2005 Robb – Silberman Report on WMD, noted:

“The widely recognized need for alternative analysis drives many to propose organizational solutions, such as “red teams” and other formal mechanisms. Indeed, the Intelligence Reform and Terrorism Prevention Act mandates the establishment of such mechanisms to ensure that analysts conduct alternative analysis. Any such organs, the creation of which we encourage, must do more than just “alternative analysis,” though. The Community should institute formal system for competitive—and even explicitly contrarian—analysis. Such groups must be licensed to be troublesome. Further, they must take contrarian positions, not just ones that take a harder line...”³

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

² 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 1. Found at

<http://www.acq.osd.mil/dsb/reports/redteam.pdf> accessed on 11 July 2006.

³ Report to the President of the United States, 31 March 2005, The Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction, page 170. Report is commonly referred to as the “Robb – Silberman Report on WMD” – named after the two co-chairman.

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to discover weakness in planning as conducting a “pre-mortem analysis” of the operations.⁴ As an example, presuppose failure, then 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 US 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.”

Somali Militia Commander⁵

USJFCOM’s Iraqi Perspective Project (IPP) study provides insights on the importance of understanding the viewpoint of the adversary objectives in our planning.

“Saddam's conviction that his regime would survive the war was the primary reason he did not have his forces torch Iraq's oil fields or open the dams to flood the south, moves many analysts predicted would be among Iraq's first in the event of an invasion. In the words of Aziz, “[Saddam] thought that this war would not lead to this ending.” Saddam realized, he would need the oil to prop up the regime. Even with U.S. tanks crossing the Iraqi border, an internal revolt remained Saddam's biggest fear. In order to quell any postwar revolt, he would need the bridges to remain intact and the fields to be open to move his forces to quell any revolt. On this basis, Saddam planned his moves.”⁶

⁴ Gary Klein, *The Power of Intuition*, New York: Doubleday, 2003, page 98 - 101.

⁵ Somalia Militia Commander to Washington Post Reporter Rich Atkinson as quoted in Victory Disease, Karcher, Timothy Major USA. Understanding the “Victory Disease” From the Little Bighorn to Mogadishu and Beyond. GWOT Occasional Papers #3. Combat Studies Institute. Combat Studies Institute Press, Fort Leavenworth, Kansas. Accessed on 23 May 2006 and found at <http://usacac.army.mil/CAC/csi/RandP/CSIpubs.asp#GWOT>

⁶ Kevin M. Woods with Michael R. Pease, Mark E. Stout, Williamson Murray, and James G. Lacy. *Iraqi Perspectives Project: A View of Operation Iraqi Freedom from Saddam's Senior Leadership*, USJFCOM: Joint Center for Operational Analysis, 2006, page 31. An abridged version of this unclassified study is found at “Saddam's Delusions: The View

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FM 5-0 describes the Military Decision Making Process in great detail and also discusses the challenges to effective planning; specifically addressing groupthink. The manual further notes, “the leader should assign individuals to independently examine the group’s decision processes”.⁷ - a capability inherent to a red team. Red Team education and training is fundamentally designed to provide the staff with the ability to comply with doctrinal mandate.

Red Team Definition



Red Team Definition

A function that provides **commanders** an **independent** capability to fully explore alternatives in plans, operations, concepts, organizations and capabilities in the context of the operational environment and from the perspectives of partners, adversaries and others.

- Alternative perspectives from a trained, educated, and functional team
- Cultural tool kit to consider adversaries and coalition partners
- Communication, negotiation, and RT TTP capability for internal critical analysis or review without being a disruptive force
- Theoretical analysis of complex situations
- How the enemy and other stakeholders think!



- Group think
- Mirror imaging
- Tunnel vision
- Failing to account for the complexity of the OE
- Cultural missteps
- Sinking to gravitational pull of our precepts and culture



“... enable the Army to escape the gravitational pull of western military thought...”
Gen Schoomaker

Figure 1. Definition

from the Inside by Kevin Woods, James Lacey, and Williamson Murray in Foreign Affairs, May/June 2006.

⁷ Department of the Army, Field Manual 5-0, *Planning*, page 2-4 and 2-5.

Red Team Focus Areas:

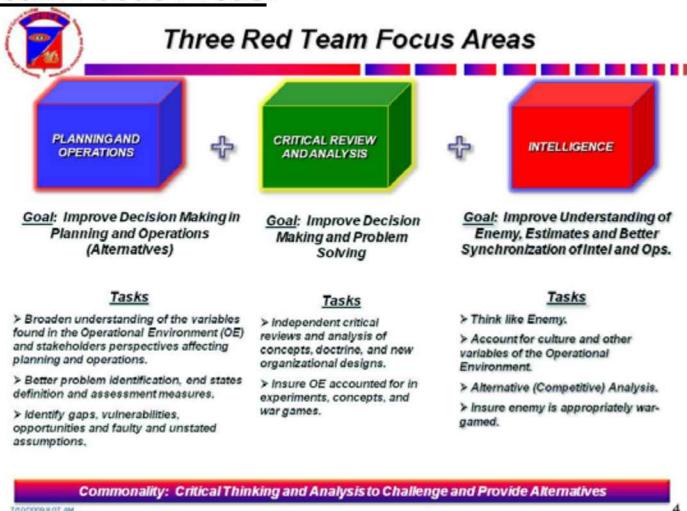


Figure 2. Red Team Focus Areas

As illustrated in figure 2, the specific focus of the Red Team will depend upon the commander's requirement, the organization, and the echelon to which assigned. Within intelligence organizations, the Red Team will primarily focus on improving the understanding of the enemy to include accounting for the cultural differences affecting potential enemy goals and objectives in order to improve intelligence estimates. Red Teams will provide alternative analysis, help ensure the enemy is appropriately portrayed in the wargame, and improve intelligence synchronization with operations.

Within the operational army, the Red Teams improve decision making in planning and operations by broadening the understanding of the operational environment from alternative perspectives, and identifying gaps, vulnerabilities, and opportunities.

Within the institutional army, 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. Red Team also “help the staff

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work the problem” or in specific instances “own the problem” such as when directed to conduct a critical analysis of a problem and present alternative solutions to the commander.

Red Team Tasks:

Army Red Team leaders and members must be prepared to:

- ❖ *Provide commanders alternatives during planning and operations.*
 - Broaden staff understanding of the operational environment
 - Assist the commander and staff to identify problems and define the end state
 - Challenge planning assumptions
 - Offer alternative perspectives
 - Ensure the adversary and other perspectives are appropriately considered during planning
 - Identify friendly and enemy vulnerabilities
 - Ensures staffs are assessing the right things
 - Help the staff determine the next right thing to do.
- ❖ *Conduct independent critical reviews and analysis of concepts, organizational designs, war games, experiments, and processes to identify potential weaknesses and vulnerabilities.*
- ❖ *Anticipate cultural perceptions of partners, adversaries and others.*
 - Anticipate 2nd and 3rd order effects of operations in a cultural context
 - Anticipate the strategic and operational level implications of actions.

The Army Red Teaming Concept

The Red Team helps the staff view the operational environment from a number of perspectives and through a number of lenses to more fully account for how adversaries, coalition partners, and others view the same environment.

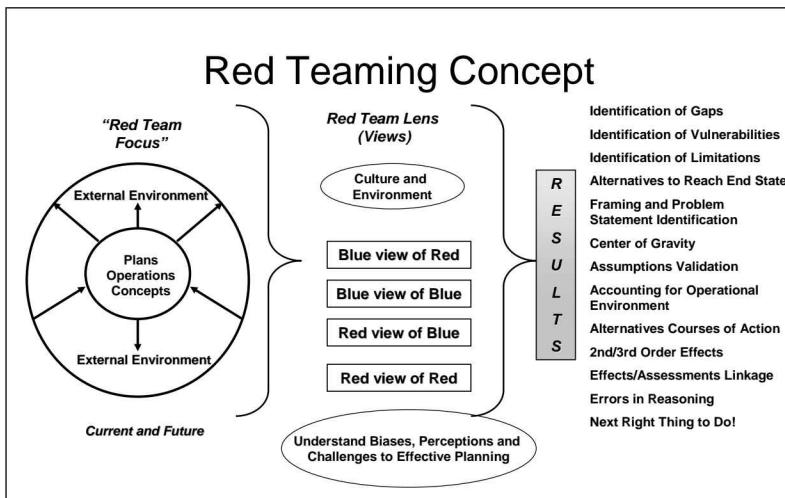


Figure 3. Red Teaming Concept

As illustrated in figure 3, by understanding culture, the operational environment, and our own biases, Red Teams can assist the commander and staff to produce better plans and execution. The following conditions affect Red Team ability to accomplish their tasks:

- 1. Red Teams require the trust and confidence of the Commander and the staff.** Commanders and staffs need to trust the Red Team's ability to provide *quality* and *timely* insights and observations through a willingness to consider and discuss insights during planning and operations.
- 2. Red Teams must understand when and to whom they should provide their observations and insights.** Red Teams do not replace the staff. Often the Red Team will observe staff planning, and offer quiet input to the staff members. Unless directed by the commander, Red Teams should remain in the background. However, if the staff dismisses an observation critical to mission accomplishment, the Red Team needs to inform the staff member that resolution is required with the Commander.

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3. Early in the planning process, identify expectations for Red Team product deliverables. Red Team and commands must establish and manage their expectations.

4. Augment Red Teams with functional and regional experts as required. Red Teams do not replace the requirement for access to skilled regional and country experts.

5. There are no formulas or simple checklists for Red Teaming. Red Teaming is an intellectual process. There is no simple formula or checklist that guarantees the insights promised by the red teaming concept.

6. Red Teaming is best done early. While Red Teaming can be done at any time, it is best done early in planning or concept development in order to save time and effort of the staff.

7. Red Team recommendations must be within the ability of the command to implement. Unsupportable solutions risk being marginalized and they are considered nothing more than academic exercisers.

Red Team - Key Questions

Red Teams continually and constructively challenge the staff's thinking processes during planning and operations. The following are types of questions which the Red Team may pose and the result:

<u>Question.....</u>	<u>Result in</u>
What if....?	Alternative analysis
What are the objectives of....?	Consideration of enemy, partner, and others on the battlefield.
What about....?	Identification of Gaps, Seams, Vulnerabilities
What are we missing....?	Identification of Gaps, Seams, Vulnerabilities

Section I – RT Fundamentals and Methodology

What happens next...?	Identification of branches and sequels
What should we assess....?	Identification of measures of effectiveness
How can we assess....?	
How do we know success?	
What worked and why?	Enables a learning organization
What didn't work and why?	Avoid patterns of operations

Summary:

- Red Teaming is largely an intellectual process.
- To be effective, Red Teams must have the Commander's confidence, support, and direction to effectively complete its tasks.
- To be effective, Red Teams balance the requirement to be independent of the staff processes in order to provide alternative views and avoid group think while remaining engaged with the staff.
- Red Teaming is confrontational – challenging existing thought processes and estimates without being confrontational to individuals or staffs.
- Red Teaming is more an art than a science – requiring Red Team members to possess superb critical and creative thinking skills and an understanding of the barriers and symptoms of poor thinking.
- Red Team best practices apply to assigned, ad hoc, or combined teams.
- Red Teaming is not process driven but effective red teams must understand the MDMP and culture of the unit in order to contribute to effective decision making.

Section I - RT Fundamentals and Methodology

Red Teams require a continually expanding menu of techniques to effectively complete its tasks which are shared among teams.

Notes:

SECTION II: Interpersonal Skills

Introduction

This section summarizes broadly accepted principles and techniques associated with effective communications and negotiations for individuals and organizations. The section also addresses group dynamics within a Red Team and interaction with others.

A key to successful red teaming is the commitment to communicating effectively across a full spectrum of means, methods, and options. Red teamers will be in a constant state of negotiation with outsiders, teammates, peers, commanders, and senior leaders. They will frequently find themselves on the “other side” as they face challenges in many organizational discussions and planning efforts.

The red teamer must be a skilled communicator and negotiator. The red teamer will have to beg, borrow, and acquire information, access to a seat, and even time to get the job done. When negotiating the time and place for delivering your product, you will likely deal with someone who has a good reason to say “NO”. The red teamer must persevere.

People develop effective interpersonal skills, or not. In either case, red teamers must expend significant effort toward optimizing their skills. Indeed, there is every reason to believe that understanding this necessity is one of the key characteristics to being an effective Red Teamer.

Related Items

1. *Gung Ho*, Ken Blanchard, Harper Perennial, New York, 1998
2. *Getting to Yes*, Roger Fisher and William Ury, Penguin Books, New York, 1981
3. *Communications Principles for a Lifetime*, Steven A. Beebe, Susan J. Beebe and Diana K. Ivy, Allyn and Bacon, Boston, 2006.

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4. *Interpersonal Communication; Relating to Others*, Steven A. Beebe, Susan J. Beebe and Mark V. Redmond, Allyn and Bacon, Boston, 2004.
5. *Coaching for Improved Work Performance*, by Ferdinand Fournies (McGraw-Hill, 2000) ISBN 0-07-135293-7
6. Group dynamics
<http://www.wilderdom.com/Group.html>
7. Group Types
<http://www.wcer.wisc.edu/archive/cl1/CL/moreinfo/MI3B.htm>
8. Explanation of MBTI <http://en.wikipedia.org/wiki/MBTI>
9. MBTI 16 Types <http://www.teamtechnology.co.uk/tt/article/mb-simpl.htm>
10. TKI and FIRO-B instruments
<http://www.cpp.com/products/tni/index.asp>

Communications

Communication has three fundamental components: sender, message, and receiver.

Effective communication requires mental and physical work, pure and simple; no accident. It requires focused preparation (i.e., research and rehearsal), disciplined execution (i.e., following planned fluid options), and agile follow-up (i.e., how, when, where, and why). Success should not be at risk.

Listening is perhaps the least experienced element of effective communication. The willingness to do so is as important as the ability itself. Communicators, sender and receiver, must understand what the other is saying, before any viable outcome is probable. When one actually listens to the other, and hears their offer, both gain a huge advantage as the process moves forward, i.e., a planning session.

The busy professional exhibits few “skills” associated with effective listening. Most force themselves to do such things

Section II - Interpersonal Skills

as look at the speaker, offer detailed feedback on what was heard or seen, take detailed notes, ask for clarification, ask for a pause, or admit to not understanding something.

The skilled and confident communicator portrays the other side of the typical communications equation. The staff and commander will marginalize a Red Team without the embedded ability to offer alternative perspectives quickly, coherently, and credibly.

Communicators

Preparation is the linchpin: reach-back, research, information sharing, peer review, rehearsal, informal coordination, on-site - “full dress” practice presentations, murder boards, etc.

- **Setting:** Consider the time and place, i.e., de-conflict where, when, and what else is happening. Especially important when the audience might be less than highly receptive.
- **Text:** Botched syntax, usage, subject predicate agreement, or spelling instantly compromise the credibility of spoken and written messages.
- **Accuracy:** Focus on getting the message right versus getting it fast! Strive for clarity, credibility, understandable, and believable. Craft, refine, and test the message.
- **Response:** draft counters for whatever the naysayers may say. Nothing brings more payoff potential than answers to questions, concerns, and cynicism.
- **Steady:** Stay “in role” at all times, with a consistent tone, message, and delivery.

Follow-Up is the touch-up or sealer. After the presentation, respond with more information and answers to questions. Ask for clarification and take good notes.

Negotiations

A good negotiator assures 2-way clarity for each player's intent and desired outcome. Therefore, the negotiator must gain two-way knowledge on:

- Exactly what is wanted
- Exactly what it can cost
- Exactly what it has to cost
- Exactly when it has to happen
- What are acceptable alternatives
- Why the two sides are holding the positions they have

Additionally, the negotiator must differentiate *positions* from *interests*.

- Separate both from the person associated with them
- Identify the underlying reason behind the position
- Find a way past the position held

"A journey of a thousand miles begins with the first step."

The negotiator must patiently pursue goals, messages, outcomes, and involvement in the organization's planning processes. Small progress, however frustrating, is still progress. Keep in mind that completing the journey is the ultimate goal, not getting there fast.

Be tactically agile and adaptive in the negotiation. Red Teamers must be able to identify and deal with three styles for participants:

1. Debaters enjoy the game. Take small steps with the debater.
2. Zealots stick to a position through hell and high water. Never inflame the zealot.
3. Solvers find the common interest leading to resolution. Help the solver find the common ground.

The challenge is to discover which 'style' will be on the other side, sooner than later; before or as the session unfolds.

Also, develop your best alternative to a negotiated agreement, (BATNA) and be prepared to accept it. A BATNA is the absolute minimum you must get out of the

negotiation, OR, it may be the one or two things that must not happen in the course of the negotiation.

Respect Your Audience

- Clearly define and focus on the problem
 - Do not assume the decision maker knows the details of your topic
 - Explain unusual acronyms and abbreviations
- Think from the decision maker's perspective
 - What is he hearing you say
 - Why is it important to him (the "so what" aspect)
 - Don't waste his time!

Group Dynamics

Ask the right questions:

1. Are roles assumed or assigned?
2. Which stage was/is the group in?
3. Why was/is a specific group effective, or not?
4. Exactly how might variables impact communication (i.e., culture, issues, politics, roles, personality, etc)?

The nature of 'red teaming' revolves around dynamic behaviors as red teamers interact within, and outside, their group. With three or more individuals in the *group*, a complex system develops with inevitable friction points. Formal groups (high structure, long lived) are best suited as an instrument for specific purposes, with the stable membership. Informal groups (low structure, short lived) are better suited to explore concepts or options, with new members for each event.

Trust is the single ingredient that binds the group (glue). During the *Forming* phase, model inclusive behavior. Create an environment that fosters commitment to the group; identify a common purpose. Ensure "all are involved" (even stakeholders). In the *Storming* phase, examine blockers of progress. Handle conflict directly; focus on 'group purpose' and the 'topic of conflict', allow differences of opinion, but

Section II - Interpersonal Skills

admonish personal attacks. In the *Norming* phase, be fair with processes. Embrace collaboration; continue to clarify expectations, making all feel welcomed, informed, and involved. In the *Performing* phase, empower the *team* to share roles; keep things fresh and exciting. Build on commitment; revisit purpose and celebrate accomplishments.

Disaster communities form to overcome common tragedies. Informal working groups are shaped by ‘need’, as social groups become coping mechanisms and evolve into avenues for action through three phases. During the ‘emergency phase’, informal groups form through emerging natural leaders with a flexible structure of authority. A formal hierarchy surfaces during the ‘transitional phase’, as survivors appear moody or depressed, and display less obedience toward natural leaders. Eventually, in the ‘reconstruction phase’, work groups shift from ad hoc and restructure for long-term staffing.

Consider other hierarchies: hygienic, safety/order, achievement, recognition, affiliation, & power. Examine consequences from the performer’s perspective of probability and time. Your nose itches - **A**ntecedent, you rub it - **B**ehavior, and the itching stops - **C**onsequence. Reinforcement (positive or negative) increases behavior, penalty/punishment decrease behavior. Consequences reduce to four categories: get something good (+reinforcement), avoid something bad (-reinforcement), get something bad (punishment), and lose something good (penalty).

Personality Instruments

Myer-Briggs Type Indicator (MBTI) explores temperament, interaction, and cognitive dynamics. It categorizes the way individuals think and act based on their preference over another. *Personality Dimensions®* (PD) confines its assessment to the four temperaments; how individuals prioritize the world around us, how individuals picture themselves, how individuals strive to experience self-esteem, our communicative styles, and contiguous behaviors. PD outlines quadrants of 'behavioral characteristics'. Gold seeks to organize and plan; stressed by disorganization. Blue pursues genuine harmony; stressed by insincerity. Green is driven by the need to know. Orange looks to use resources at hand for quick solutions.

Interpersonal needs shape our interaction, and change as individuals interpret their environment; the face worn. The *Fundamental Interpersonal Relations Orientation-Behavior™* (FIRO-B®) is a snapshot in time of wanted or expressed needs; correlating inclusion, control, and affection. Affection relates to warm connections and emotional ties. Its strength determines the degree of closeness a person will seek. Control relates to decision making, influence, and persuasion. Its strength determines the degree of power or dominance a person will seek. Inclusion relates to associating with others. Its strength determines the degree of contact and prominence that a person seeks.

Conflict is a natural byproduct of human interaction.

Thomas-Kilmann Conflict Mode Instrument (TKI) identifies a person's preferred style for handling conflict, correlating assertiveness with cooperativeness. One mode may be better suited to a specific situation. Collaborating to find a win-win solution requires high assertiveness, high cooperativeness. Competing for a win requires high assertiveness, low cooperativeness. Compromising to find middle ground requires moderate assertiveness and cooperativeness. Accommodating to yield requires low

Section II - Interpersonal Skills

assertiveness, high cooperativeness. Avoiding to delay requires low assertiveness, low cooperativeness.

Notes:

SECTION III: Operational Environment

Purpose:

- *This section provides a methodology for analyzing the operational environment using 13 Critical Variables (CVs).*

Several doctrinal methodologies exist to analyze the operational environment. PMESII+PT⁸ serves as a Joint doctrinal methodology. METT-TC⁹ serves as an Army doctrinal methodology. Methodologies can be enabling or limiting. UFMCS uses the 13 CVs as a tool to help the Red Team analyze the operational environment in greater fidelity. This section also provides additional tools that link the different doctrinal methods.

Critical Variable Overview

The JOE defines the operational environment (OE) 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.”¹⁰

The concept of alternative perspectives lies within the anticipated boundaries of the operational environment. Therefore, it is essential to define those elements of the OE that have the greatest impact on the application of force. This handbook will discuss the operational environments in terms of critical variables. These variables provide a comprehensive set of lenses for a detailed systems analysis. These lenses can assist in looking at a society in a more holistic manner.

⁸ Political, military, economic, social, information, infrastructure + physical environment and time.

⁹ Mission, enemy, terrain, troops, time, and civil considerations.

¹⁰ Joint Pub 3-0, 17 Sep 2006 with Change 1 dtd 13 Feb 08.

Section III – Operational Environment

These variables define the conditions, circumstances, and influences that affect the employment of military force and influence the decisions of the commander.

The 13 Critical Variables:

1. 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 demonstrated 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 U.S. This is due to our standoff technology, precision guided munitions (PGM), and sophisticated intelligence, surveillance and reconnaissance (ISR) capability. For this reason, adversaries will seek to use complex terrain, unfavorable weather, and less trafficked sea lanes when confronting U.S. forces.

2. 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 strength or weakness. 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 US 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.

3. Sociological Demographics

Demographics concern the characteristics of a human population or part of it. Demographics measure the size, growth, density, 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. This often results in conflict. Overpopulation and an uneducated, unemployed “youth bulge” can aggravate economic, ethnic, religious, and other rivalries.

4. Culture

Culture is a system of shared beliefs, values, customs, behaviors, and artifacts 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. A culture can change over time. 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.

5. 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 alliance construct. 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

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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.

6. Military Capabilities

Existing military capabilities are the most critical variable for military operations, political aspirations, resolve, and will. 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 our enemies can be flexible and adaptive. They could have the knowledge and ability to use a combination of conventional and unconventional capabilities. The commander must have information on conventional and unconventional capabilities, his ability to use modern technology, and his 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.

7. Information

Information involves civil and military access, use, manipulation, distribution, and reliance on information technology systems by an entity. Information technology is the systems or mechanisms for preserving or transmitting information. Various actors seek to use perception management to control how the public sees things. The threat will exploit US mistakes. They will also use propaganda to sway the local population to support their cause. Media and other information means can make

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combat operations visible to the world. The media can LAO influence US political decision making, internal opinion, or the sensitivities of coalition members.

The expansion of information technology will greatly assist commanders. Complicated networks provide a vast web of communications capabilities. Redundant communications systems allow for the constant flow of information.

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

8. 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 U.S.'s advantage. Understanding this variable can determine whether the threat has the technological ability to achieve equality or overmatch in selected areas. The presence of sophisticated technology can indicate where opponents expect to achieve the greatest advantage or perceive the greatest threat.

9. External Organizations

The US military could find a variety of external organizations in a conflict or failed state. These include non-government organizations (NGOs), international humanitarian organizations, multinational corporations, transnational organizations, and other civilian organizations. The organizations can have stated and hidden interests that assist or hinder US 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.

10. 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 determines the duration and conditions of termination of a conflict.

The willingness of the people to support threat 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 US military operations.

Most countries view the U.S. national will as a U.S. strategic center of gravity.¹¹ 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.

¹¹ Wayne Michael Hall, *Stray Voltage: War in the Information Age*. Annapolis, MD: Naval Institute Press, 2003. Mr. Hall Defines will as "the resolution, sacrifice, and perseverance of individuals and groups of people to win in a competitive struggle."

11. 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 decision-making. How much time is available and how long events might take will affect every aspect of military planning. This includes force package development, force flow rate, quality of intelligence preparation of the area of operations, need for forward-deployed forces and logistics, etc. 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. This different view of time causes a disjointedness in operational tempo.

12. 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. Economic deprivation is also a major cause of conflict. One actor may have economic superiority over another for many reasons, including access to natural resources or power.

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 US economy is a center of gravity that is very sensitive to perturbation. American economics and the

power that flows from it will be inviting targets. Any disruption of the flow of oil products would have a significant negative impact on our economy. Many of our economic institutions may appear vulnerable to cyber attack.

Economic superiority rather than military superiority may be the key to power or dominance within a region. Analysis identifies those elements of economic power that may be a significant characteristic of the battlefield. In a globalized economy, the threat may leverage its economic power in a manner that affects friendly operations.

13. Religion

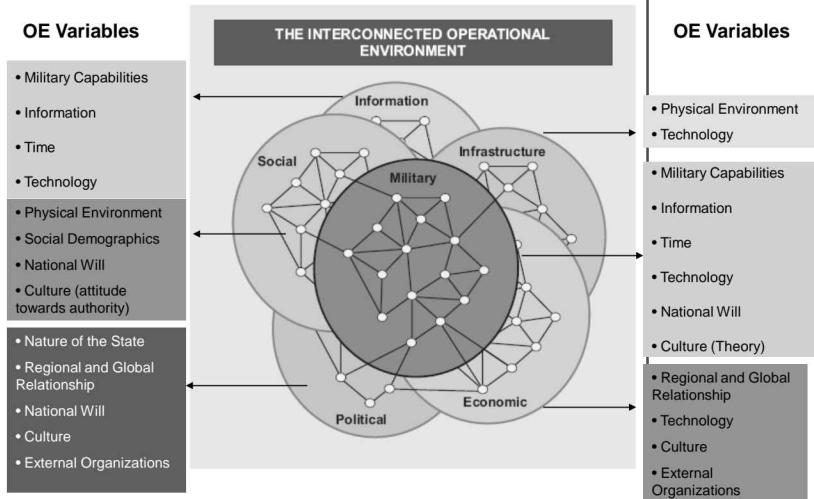
Religion is a variable that affects each of the preceding variables. Religion in itself “is a world view in which people personify cosmic forces and devise ways to deal with them that resemble the ways they deal with powerful human beings in their society. Religion provides man with a way to deal with uncertainty that they otherwise cannot control.¹²”

Religion is interwoven with a nation’s culture. It can be a cornerstone that affects every aspect of culture. It also provides the individual a more worldly connection to other co-religionist outside the boundaries of a particular state. Our understanding of the religion practiced in a state that U.S. forces operate is crucial to our success. This understanding will shape the way the Army should conduct operations i.e. belief system of our opponent, key sites, organization of society, interpersonal relationships between our forces and the population.

¹² Robert H. Lavenda and Emily A. Schultz, *Core Concepts in Cultural Anthropology*. Boston, Mass: McGraw Hill, 2007.

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Meshing Models - Joint Publication 3-0 and OE Crosswalk



Operational Environment. A composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander.

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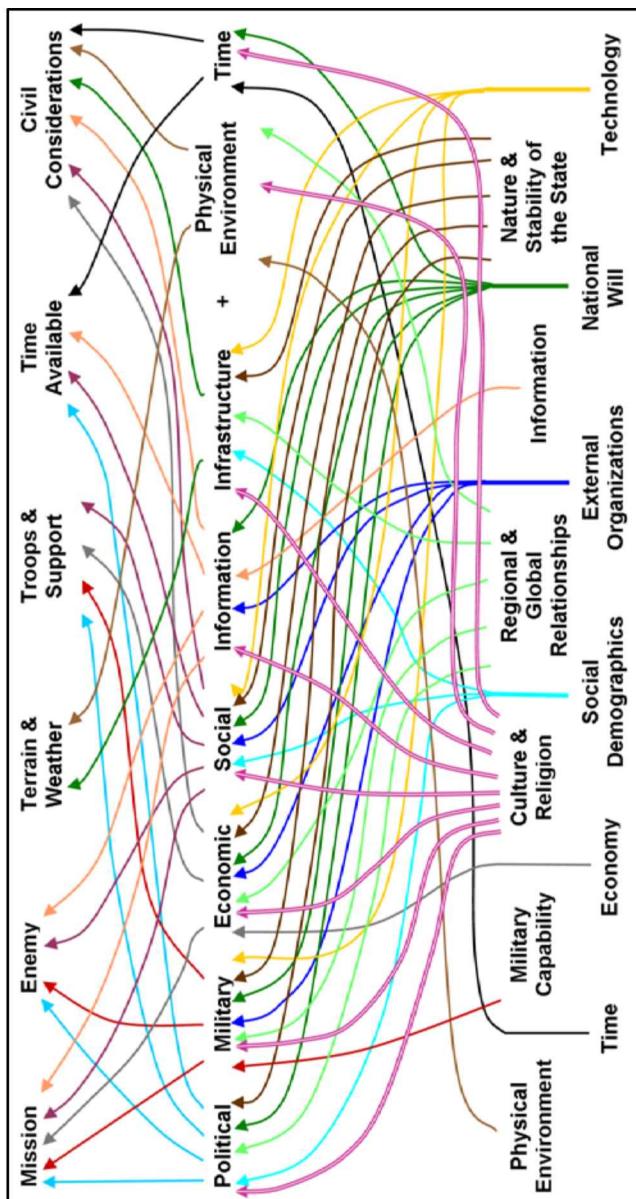
Mapping the Critical Variables to PMESII+PT and METT-TC

The following tables list a relationship between the critical variables, PMESII+PT, and METT-TC portrayed in the CV Map.

What elements of PMESII+PT inform METT-TC	
<u>Mission</u>	<u>Enemy</u>
<ul style="list-style-type: none"> • Politics • Military • Information • Social • Economy 	<ul style="list-style-type: none"> • Politics • Military • Social • Information
<u>Terrain & Weather</u>	<u>Troops & Support Available</u>
<ul style="list-style-type: none"> • Infrastructure • Physical Environment 	<ul style="list-style-type: none"> • Politics • Military • Economy • Social
<u>Time Available</u>	<u>Civil Considerations</u>
<ul style="list-style-type: none"> • Politics • Social • Information • Time 	<ul style="list-style-type: none"> • Politics • Military • Economy • Social • Information • Infrastructure • Physical Environment • Time

What Critical Variables inform PMESII+PT		
<u>Politics</u>	<u>Military</u>	<u>Economics</u>
<ul style="list-style-type: none"> • Culture • Religion • Nature & Stability of State • Regional & Global Relationships • Sociological Demographics • External Organizations 	<ul style="list-style-type: none"> • Culture • Religion • Military Capabilities • Nature & Stability of State • Regional & Global Relationships • Technology • National Will 	<ul style="list-style-type: none"> • Culture • Religion • External Organizations • Technology • Nature & Stability of State • National Will
<u>Social</u>	<u>Information</u>	<u>Infrastructure</u>
<ul style="list-style-type: none"> • Culture • Religion • Sociological Demographics • Technology • External Organizations • Nature & Stability of State • National Will 	<ul style="list-style-type: none"> • Culture • Religion • External Organizations • Information • National Will 	<ul style="list-style-type: none"> • Sociological Demographics • Technology • Regional & global Relationships • Culture • Religion • Nature & Stability of State • Technology
<u>Physical Environment</u>		<u>Time</u>
<ul style="list-style-type: none"> • Culture • Religion • Regional & global Relationships • Physical Environment 		<ul style="list-style-type: none"> • Time • Culture • Religion • National Will

MAP CVs to PEMSII+PT to METT-TC



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Notes:

SECTION IV: Theory & Decision Making

Purpose: This section focuses on:

- Theory
- Complexity and its relationship to theory
- The challenges of human thinking
- The impact of theory, complexity and cognitive challenges on decision making

General. Red teams need to understand the concepts of theory, complexity, cognitive challenges, intuition, and analogy to facilitate critical review of both analytic and intuitive decision making.

Theory. For hundreds of years, human beings believed that the earth was the center of the universe. Ptolemy established his views in the 2d Century AD, creating elaborate models that explained how the other planets of the solar system revolved in perfect circular orbits around Earth. There was a problem with Ptolemy's version of the "truth," however. Based upon the time of the year, the other planets' sizes appeared larger or smaller to viewers on earth, which would be inconsistent with a perfectly circular orbit. In fact, these planets' orbits were not perfectly circular, as proposed by Ptolemy. They were *elliptical*, which destroyed Ptolemy's vision of solar reality. Ptolemy's views survived until the early 16th Century, when Copernicus challenged "Ptolemaic Law" by proposing that the Earth actually revolved around the sun, and that the planets' orbits were elliptical.¹³

Ptolemy's views on our solar system represented a **theory**. Unfortunately, to the many human beings who accepted it, his theory was masquerading as a **law**: a truth or reality.

What is theory...and why is it important? In order to understand what theory is, it first may be easiest to describe

¹³ Stephen Hawking, *A Briefer History of Time*, 2005, pgs 8-12.

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theory's ultimate objective: to become law. Used in this context, **law** is defined as “a statement of a relation or sequence of phenomena *invariable under the same conditions.*”¹⁴ (Italics added.) Examples of this type of law are Newton’s laws of motion, Avogadro’s laws of chemistry, Boyle’s laws of physics, etc. In each case, the laws cited have a specific, proven, and reliable relationship that is invariable under similar conditions.

Law has a direct correlation to a **fact**. A fact is defined as “something that actually exists; reality; truth.”¹⁵ Unfortunately, people tend to routinely believe the infallibility of “laws” without recognizing that most laws are actually theories. Some examples include the Law of Supply and Demand, the Law of Unintended Consequences, the Law of Diminishing Returns, etc. In each of these cases, it is arguable that each law cited is actually a theory, which humans blindly accept, without consciously challenging it: only when surprised by the unintended consequences do people realize that they applied a theory as if it were law. (Euphemistically, there is a phrase for this phenomenon: “The truth changed.” If it were the truth to begin with, it wouldn’t have changed. More likely, it was theory at work.) Finally, theory correlates to **assumption**, defined as “something taken for granted or accepted as truth without proof; a supposition.”¹⁶

Which brings us back to the question: What is theory...and why is it important? **Theory** is defined as “a coherent group of general propositions used as principles of explanation for a class of phenomena.”¹⁷ A theory is neither fact nor law. Instead, it is a form of assumption—and could be an excellent assumption, mediocre assumption, or extremely

¹⁴ Dictionary.com unabridged

¹⁵ Dictionary.com unabridged

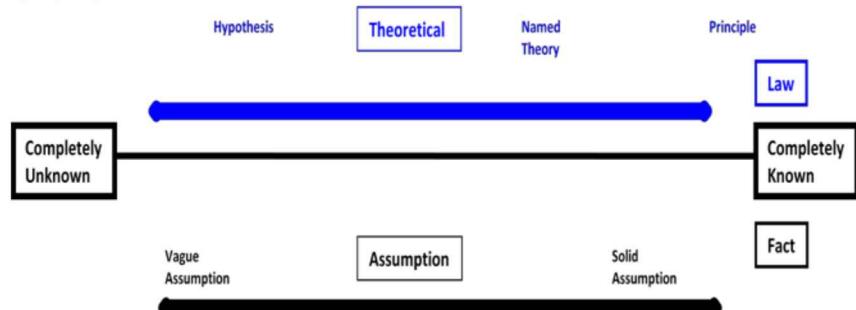
¹⁶ American Heritage Dictionary

¹⁷ Dictionary.com unabridged

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poor assumption. Theory—that which falls short of law—exists along a continuum, and can include **hypothesis** and **principle**. An **hypothesis** is defined as “a tentative explanation for an observation, phenomenon, or scientific problem that can be tested by further investigation.”¹⁸ A hypothesis exists at the left end of the theory continuum, wherein basic ideas about a phenomenon are proposed and tested. Extensive testing of hypotheses, over time, result in the formation of a larger body of *named* theory. A theory tested repeatedly, and seen as standing long-term scrutiny, may result in the distillation of a set of **principles**, defined as a reliable statement concerning the functioning of natural phenomena or mechanical processes.

Seen graphically, these terms relate to each other as follows:



Theories—to include hypotheses and principles—must continuously be challenged. It is much easier to disprove a theory than to prove one. On the other hand, to prove a theory's validity, one must continue to hypothesize endlessly. Stephen Hawking, the author of *A Brief History of Time*, says this about theory:

No matter how many times the results of experiments agree with some theory, you can never be sure that the next time a result will not contradict the theory. As philosopher of science Karl Popper has emphasized, a good theory is characterized by the fact that it makes a number of predictions that could in principle

¹⁸ American Heritage Dictionary

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be disproved or falsified by observation. Each time new experiments are observed to agree with the predictions, the theory survives and our confidence in it is increased; but if ever a new observation is found to disagree, we have to abandon or modify the theory.¹⁹

Even though principles fall closely to facts on the continuum above, principles still need to be challenged. For example, the Principles of War are exceedingly useful to military personnel as they consider how best to proceed on the battlefield. To become Principles, each has emerged as a time-tested portion of wider, war fighting theory, and helps frame how planners see warfare. But the Principles are not infallible, and should not be applied rigidly in all circumstances. The danger of principles is that they become dogma, used blindly in spite of the situation. One must use judgment and wisdom to know when to use principles, and when a principle's use does not fit the circumstances.

Finally, the process of developing a theory—or modifying an existing theory when the situation requires—is defined as **theorizing** (or **hypothesizing**). As red teamers work with hypotheses, theories and principles—those suppositions that fall short of law—it is necessary to continue to challenge, test, and adapt those theoretical ideas as required.

Theorizing is the process of actively challenging existing theoretical ideas, and developing better theories based on the situation. In the novel *Ender's Game*, this is what Ender does as he learns how to fight the enemy. While his classmates use specific tactics, Ender observes, tests, and then adapts his methods, and in the process becomes more successful than his classmates. Ender is *theorizing*. In a similar manner, the Oakland Athletics manager Billy Beane consciously challenges the theories of professional baseball in what it specifically takes to win a game, and correspondingly in how baseball players should be recruited. In the book *Moneyball*, Beane takes on the professional

¹⁹ Hawking, page 14.

baseball establishment by challenging the prevalent beliefs associated with game tactics and drafting new players. His challenge of professional baseball's conventional wisdom helped define a new theory on how the game should be played. In order to do that, Billy Beane *theorized*.

How does one challenge a theory? A theory is supposition, akin to a written or verbal argument, and one can challenge it in much the same way that one deconstructs an argument. To challenge theories, first one must be certain of what the theory *is*. Beyond that, some key questions to ask (as they pertain to the theory) are as follows:

- Where did the theory come from? Who was its author? What is it that the author might be trying to get us to believe?
- Since a theory is a form of an argument, there are reasons or evidence that support the theory (from the perspective of the theory's author). Are the reasons or evidence valid, or is there a mismatch between the theory's propositions and the actual situation on the ground? If so, it may be time to theorize.
- Are there any value conflicts associated with the theory? Any inherent value judgments in the theory which call its validity into question?
- Does the theory fall victim to any one of a number of argument logic fallacies? For example, is the theory based on an analogy? If so, is it a faulty analogy? Does the theory appeal to the masses, or to questionable authority, etc?
- If statistics are used as part of the theory, is there anything wrong with those statistics?
- Are there rival causes? Is there another explanation or theory which is more appropriately suited to the situation?
- Is there anything “missing” in the theory? Is there something “not being said?”

Why is theory necessary? First, because theories surround us without our consciously realizing it. Want to know how best to invest your money, raise your children, or train and win in sports? Pick up a “How To” book. These books are not based on immutable laws, however. They are based on other peoples’ theories.

Want to conduct a counterinsurgency? There is no law for use in executing a counterinsurgency, but theories abound. The trick is understanding how well suited any one of the theories is to the insurgency at hand, and how much one must adapt that theory in order to ensure it fits the task. Just as importantly, remember that even when an individual theorizes in adapting a theory to suit the circumstances, it still is not a law. It is a theory—and requires continuous challenging.

For most everything, individuals proceed along the lines of someone else’s theories. Sometimes they work. Sometimes they don’t. Regardless, the absence of those theories would mean that we would have to figure out everything, in complex detail, for ourselves before acting.

Just as importantly, however, theories are necessary because the world is much too complex to understand without them. In *The Logic of Failure*, Dietrich Dorner defines complexity as

... a label we give to the existence of many interdependent variables in a given system. The more variables and the greater their interdependence, the greater that system’s complexity...The links between the variables oblige us to attend to a great many features simultaneously, and that, concomitantly, makes it impossible for us to undertake only one action in a complex system...A system of variables is “interrelated” if an action that affects or is meant to affect one part of the system will also always affect other parts of it. Interrelatedness guarantees that an action aimed at one variable

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will have side effects and long-term repercussions. A large number of variables will make it easy to overlook them.²⁰

Dorner is relating how complicated things really are—and how our actions in complex environments often spawn unintended consequences, because of our inability to accurately see and predict what might happen. Based on Dorner's discussion above, individuals would be challenged to perfectly represent all of the complexity that surrounds us. Morgan D. Jones, author of *The Thinker's Toolkit*, believes “[that we] settle for partial solutions because our minds simply can't digest or cope with all of the intricacies of complex problems. We thus tend to oversimplify...”²¹ People resort to theory instead because it simplifies the complexities to an acceptable level and in the process provides a simplified framework with which to understand the complexity without actually having to wade into it.

But using theory can be a double-edged sword. In reducing complexity—the reality or truth surrounding us—to a theory, the theory's author has to take shortcuts somewhere, and therein lies the danger. The shortcuts taken to construct a theory perhaps miss the salient interrelationships of the variables at work—resulting in an inaccurate theory. Additionally, there's always the chance that the practitioners of a theory will misconstrue the theory itself, or misapply it if it does not fit the actual situation. A theory is a shortcut in thinking, and red teamers are charged to examine such shortcuts.

The challenges of human thinking. Consciously discerning the difference between theory and law, as well as juggling complexity, are difficult endeavors. As if that were not enough, however, most human beings are challenged thinkers too, which further complicates their inability to discern the reality which surrounds them. Several authors

²⁰ Dietrich Doerner, *The Logic of Failure*, 1989, page 38

²¹ Morgan D. Jones, *The Thinker's Toolkit*, page xii.

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note how human beings subconsciously allow emotion, bias, values (based on culture, religion, history, social structure, and political belief), and existing mind-sets to exhibit a powerful influence on how they interpret information and think about it. Two of these authors are Morgan D. Jones and Richards Heuer.

Jones, a career intelligence analyst with the CIA, states in his book *The Thinker's Toolkit*

We view the world through a dense veil of burdensome, thought-warping emotions, biases, and mind-sets. Through this veil we sometimes perceive cause-and-effect and other ‘patterns’ where there are none. We are prone to grace these nonexistent patterns with self-satisfying explanations with whose validity we are instinctively unconcerned. Finally, we convert these explanations into rock-hard beliefs that we defend in the face of incontrovertible contradictory evidence.²²

Jones goes on to point out that, “There is no question that the unconscious has a governing role in much of what we consciously think and do.”²³ As a result, Jones believes that human beings think poorly in several ways, to wit: by formulating conclusions to problems before gathering evidence and conducting analysis (jumping to conclusions); and by allowing bias and emotion to lead us to support a conclusion *unsupported* by available evidence.²⁴ Further, Jones notes that we take mental shortcuts subconsciously, not realizing it at the time; we tend to view the world in patterns, feeling a need to find explanations for everything, whether or not those patterns (and their associated cause and effect) are present; and that we instinctively rely on biases and assumptions.²⁵

Richards Heuer also a career analyst in the CIA, provides additional ideas concerning the challenges of human

²² Morgan D. Jones, *The Thinker's Toolkit*, 1995, page 46

²³ Jones, page 10

²⁴ Jones, page 11

²⁵ Jones, pages 13-37

thinking. He believes that due to limits in human cognition, our minds cannot cope with the complexity around us, and that individuals tend to construct simplified models. In so doing, people tend to perceive what they expect to perceive, rather than that which exists in front of us. People are overly eager to jump to conclusions when the situation suits us, whether those conclusions are accurate. Further, we tend to justify those conclusions with evidence that supports our “discovery,” and neglect evidence that is contrary with whatever conclusion we’ve jumped to.²⁶

What do theory, complexity, and challenged human thinking have to do with Army decision making? Military decision making occurs in, and is related to, complex environments. Obvious examples are urban environments, cultural contexts, the socio-economic aspects of stability operations, etc. Based on the Dorner discussion of complexity above, it should be easy to understand that “sometimes we don’t see what’s in front of us.” For that reason, commanders and staffs must resort to the use of theory in order to make decisions, and to function. However, in the process of doing so, commanders and staffs may be affected by the types of challenged thinking that Jones and Heuer refer to, above. Red teamers need to be ready to recognize when theory is being applied, what the theory is, whether the theory is appropriate for the situation at hand, and whether, in the process of conducting their analysis, the commander and staff have fallen prey to the types of challenged human thinking discussed by Jones and Heuer.

In this process, being familiar with the various theories associated with military operations is paramount. Otherwise, the red teamer may not be able to discern theory’s valid (or invalid) use in a particular context.

²⁶ Richards Heuer, The Psychology of Intelligence Analysis, 1999, pages 7-14

Joint and Army Doctrine on Decision Making. Joint and Army doctrine place a premium on decision making since much of the business of commanders is deciding what to do. The Army in particular has a fully developed body of doctrine on decision making and problem solving in the exercise of command. Field Manual 3-0 *Operations* defines battle command as the

...exercise of command in operation against a hostile, thinking enemy,” going on to assert that, “the art of command lies in conscious and skillful exercise of command authority through visualization, decision making and leadership.²⁷

All of the baseline Army field manuals associated with operations, tactics and planning discuss, in one form or another, decision making as a component of command.

FM 6-0 Mission Command: Command and Control of Army Forces asserts that decision making is but one of three elements of command including decision making, authority, and leadership. Acknowledging that decision making and command lie in the provinces of both art and science, the manual lists two types of decision making—analytic and intuitive. FM 6-0 describes analytic decision making as structured and “analytic,” going on to say that the military decision making process is the Army’s system for analytic decision making. Intuitive decision making, on the other hand, “emphasizes pattern recognition based on knowledge, judgment, experience, education, intelligence, boldness, perception, and character.”²⁸ Almost as a logical consequence of the military decision making process, staffs produce analysis and look for decisions to be made deductively. On the other hand, commanders, who must develop a concept of the operation, must reason inductively to produce a synthesis.

²⁷ FM 3-0 *Operations*, p 5-2.

²⁸ FM 6-0 *Mission Command*, p2-4. All quotations in this paragraph are from this page of FM 6-0.

Thus, the Army has a deductive approach to decision making based on analysis and an inductive approach based on intuition. However, decision makers generally operate in one realm or the other and most develop an approach peculiar to them. Equally important neither commanders nor their staffs necessarily are conscious either of how the commander decides and even whether the commander is reasoning deductively or inductively. Red teams can provide valuable service by learning to understand whether their commander is an intuitive or analytic decision maker.

How their commander thinks and decides will drive the staff and may create systemic gaps that the Red Team can help identify and close. This is a skill that must be developed over time, and requires red teams to be discrete about their conclusions. Red teams that are able to discern how their commander makes decisions are better able to identify and examine assumptions and concepts developed by their commander. According to General Wallace, Commanding General of Training and Doctrine Command, "...folks from outside the staff able to take a dispassionate look at the concepts and other products developed by the staff [would be a valuable addition to that staff]."²⁹

Analytic Decision Making. In the Army, analytic decision making is conducted under the guise of the Military Decision making Process. See Section VI.1 of the Red Team Handbook for more information concerning MDMP.

Intuitive Decision making. Intuitive decision making is the second of the two types of decision making that the Army asserts commanders used in arriving at choices. Gary Klein argues that in addition to "conventional" tools for decision making, people use "sources of power" including "intuition,

²⁹ With permission of General William S. Wallace, USA, Retired, former Commanding General TRADOC, from a presentation made at UFMCS, Fort Leavenworth, KS on 13 July 2006.

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mental simulation, metaphor and storytelling.”³⁰ Generally, Klein takes the view that natural decision making relies almost exclusively on these other “sources of power.” Klein argues that naturalistic decision making is based on experience. Commanders at different echelons have different levels of experience, but none are necessarily experienced at any echelon on their first day on the job.

The Army understands this dilemma and expends considerable effort at education intended to arm soldiers with the ability to make intuitive decisions on the basis of a body of experience coupled with capacity to develop and test analogy or metaphors. Commanders, whatever their experience, tend to use naturalistic decision methods in any case—they often go with their gut. Klein suggests mental simulation as a method to train intuitive decision making.

Mental Simulation. Klein describes mental simulation as “the ability to imagine people and objects consciously and to transform those people and objects through several transitions, finally picturing them in a different way than in the start.”³¹

Premortem analysis is an application of mental simulation. The premise for premortem analysis is that people may feel too confident once they have arrived at a plan, especially if they are not highly experienced.³² In a premortem analysis, planners imagine that it is months into the future, the plan was executed, and it failed. That is all they know; they have to explain why they think it failed.³³

See pg 138 for a description of premortem analysis as a RT Tool.

³⁰ Gary Klein, *Sources of Power: How People Make Decisions*, Cambridge, Mass.: The MIT Press, 1998, p3.

³¹ Klein, p 45.

³² Klein, p 71.

³³ Klein, p 71.

Analogy in Decision Making. Commanders often use analogy in deciding what to do. Analogy is a comparison drawn from experience. It is the assertion that one thing is like another. Experience may be direct, if the decision maker has personally “experienced” a similar event, or indirect if the decision maker relies on someone else’s experiences. Decision makers may draw on the experience of others by their study of history or even as consequence of “storytelling.” In describing the power of analogy, professors Richard E. Neustadt and Ernest R. May observed that, “...decision-makers always draw on experience whether conscious of doing so or not.”³⁴

During the Cuban Missile crisis, all of the decision makers could remember personally the attack on Pearl Harbor. For them the comparison between the attack on Pearl Harbor and a “surprise” attack from Cuba resonated. Dean Acheson did not share the view of some of the decision makers about the validity of Pearl Harbor analogue. Acheson pointed out where the analogy failed. President John Kennedy and his team of advisors used analogy but they debated the validity of comparisons that they made—they tested their analogues and sometimes as Acheson pointed out found them lacking.

Confronted with the need to get inside the mind of the enemy commander in Burma in World War II, Sir William Slim had no direct basis for understanding how his counterpart Lieutenant General Kawabe would think and operate, but he did have indirect experience. According to Slim,

...I had studied the Russo-Japanese war...the “Japanese were prepared to throw in every man, and more than once tipped the scales of victory with their very last reserves. The Japanese generals we were fighting had been brought up on the lessons of

³⁴ Richard E. Neustadt and Ernest R. May, *Thinking in Time: The Uses of History for Decision Makers*, New York: The Free Press, 1986, p. xxi.

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that war, and all I had seen of them in this convinced me that they would run true to form and hold back nothing.³⁵

Slim then used an analogy to make at least a preliminary judgment about his adversary and he did so from an “indirect” experience. Slim used the analogue to form a hypothesis to predict how Kawabe might operate. He believed that given the Japanese leadership operated in a certain way nearly forty years earlier and continued to operate the same way in the early going of World War II, they were likely to continue to operate in the same way in the future. In the end, Kawabe’s actions tended to validate Slim’s hypothesis based on analogy.

Untested analogy can also lead decision makers astray. For example, it seems likely that Israel assumed that the conditions and resistance in Lebanon in the summer of 2006 were roughly the same as those of 1982 – this analogy turned out to be false in many respects.

Red Teams must recognize when an analogy is used. They must examine the analogue and the original for points of confluence and divergence. When appropriate, the red team must challenge mistaken or false analogy. Red teams should also understand the use of analogy as the means to develop hypothesis about the future, but should work to support testing them and if the command seeks to avoid testing they must challenge those untested hypothesis.

Conclusion. Red teams support commanders and staff best when they understand how the commander makes a decision. Recognizing the approach and challenging assumptions, theories or testing analogies is as important as adjusting to the personality of the commander. Red team leaders and members will make important contributions when they understand the use of theory, intuition, and

³⁵ Field-Marshall Sir William Slim, *Defeat Into Victory*, London: Cassell and Company LTD. 1956, p.221.

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analogy in decision making. These tools for decision making are ancient and so is the discipline of red teaming in effective decision making.

What's the “So What” of this section for red teamers?

- Theory serves as an important tool for red teams both in supporting decision making and in understanding the environment in which their unit must operate.
- Theory is not law, and it is not fact. However, human beings subconsciously tend to accept theories blindly, without challenging them.
- Theories are arguments, and Red teamers can challenge theories in much the same way that they deconstruct verbal and written arguments.
- When red teamers hear the term “law” used, they should challenge it immediately. It may actually be a theory masquerading as the truth.
- Part of the red team challenge is teasing out the underlying theories (or assumptions) in a particular concept or issue—which others on the staff do not consider challenging.
- Red teamers must be able to discern whether a theory is based on a solid argument, and whether the theory is suited to the specific situation in question.
- In “figuring out” a complex situation—observing, determining the interdependent variables and their corresponding relationships on each other—and in discerning “what's going on here, and why,” red teamers need to be able to *theorize*—adapting an existing theory to the situation.

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Notes:

SECTION V: DESIGN AND PROBLEM FRAMING

The Meaning of [Operational] Design: Design is both an emerging concept and embedded in Joint and Army doctrine.

As noted in FM 3-0, Operations, “The concept of design is linked to understanding, visualizing, and describing problems as part of Battle Command.”³⁶ When used in this context, design aids the commander’s visualization of the problem, the initial understanding of the operational environment, and provides the foundations for the “commander’s initial intent” statement or planning directive.

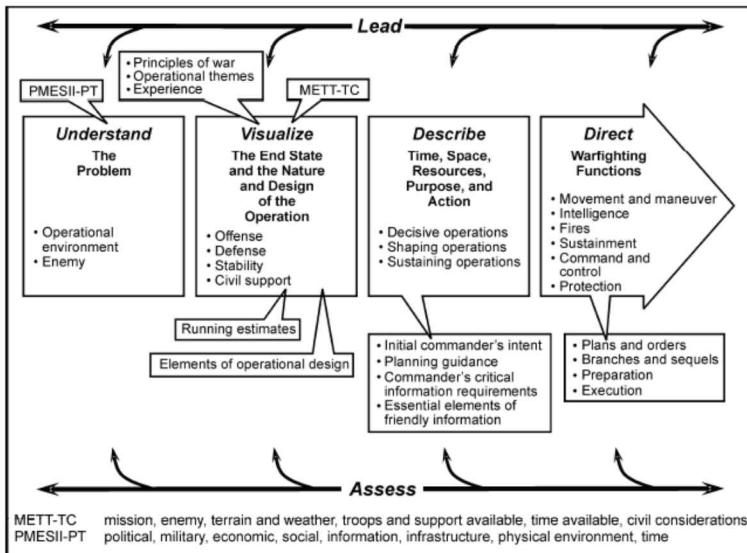


Figure 5-1. Battle command

Design essentially meets the requirement outlined by General (R) Tony Zinni notes:

“We need to look at the world in nitty-gritty detail – nations, regions, trends, problems, unstable situations, emerging crises,

³⁶ FM 3-0, Operations, 2008, page 5-13.

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conflicts. We have to analyze, synthesize, and understand as best as we can. Out of this should come a realistic vision that answers these questions: What kind of world do we want? What do our interests lie? What threatens us? What can we do about that? What is the best we can achieve? How can we get there? What stands in our way? What are we doing to ourselves that stands in our way?”³⁷

A key element of design is the collaboration among commanders and their design teams to determine and frame the problem and visualizing potential solutions (as illustrated below).

FM 3-24, Counterinsurgency (December 2006) introduced the distinction between designing and planning as a tool to understand the complexity of the COIN environment - noting:

“It is important to understand the distinction between design and planning. (See figure 4-1.) While both activities seek to formulate ways to bring about preferable futures, they are cognitively different. Planning applies established procedures to solve a largely understood problem within an accepted framework.

Design inquires into the nature of a problem to conceive a framework for solving that problem. In general, planning is problem solving, while design is problem setting. Where planning focuses on generating a plan—a series of executable actions—design focuses on learning about the nature of an unfamiliar problem.”³⁸

³⁷ Zinni, Tony General (ret) *The Battle for Peace: A Frontline Vision of America's Power and Purpose*. MacMillian Palgrave, 2006, page 9.

³⁸ FM 3-24, Counterinsurgency, December 2006, page 4-2. Note Chapter 4 deals with problem framing.

Section V - Design & Problem Framing

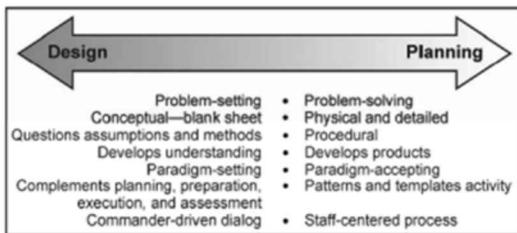


Figure 4-1. Design and planning continuum

FM 5-0, Operations Process (previously titled Army Planning and Orders Production) is currently being redrafted, and will contain a chapter on the relationship of design and planning and highlight the role of the Red Team.

The second doctrinal meaning of design uses the term "operational design." In this sense, operational design serves as a "bridge between the strategic end state and the execution of tactical tasks" whereby "the elements of operational design help operational commanders clarify and refine their concept of operations by providing a framework to describe operations."³⁹ FM 3-0 further notes:

"Operational design is the conception and construction of the framework that underpins a campaign or major operation plan and its subsequent execution (JP 3-0). Through operational art, commanders and staffs develop a broad concept for applying the military instrument, including landpower, and translate it into a coherent, feasible design for employing joint forces. This operational design provides a framework that relates tactical tasks to the strategic end state. It provides a unifying purpose and focus to all operations."

³⁹ FM 3-0, page 6- 1

Section V - Design & Problem Framing

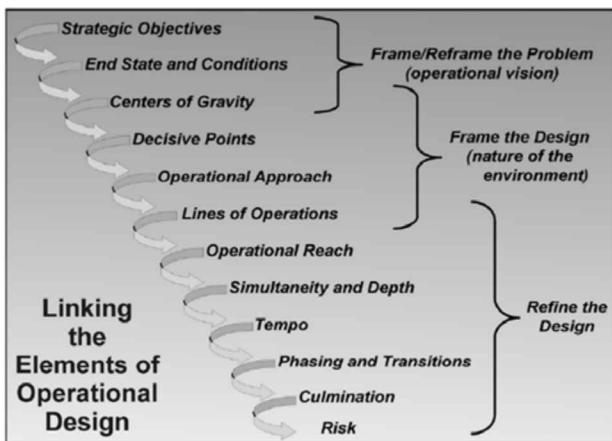


Figure 6-4. The elements of operational design

Red Team Role in Design: Red Team role in design

- Red Team representation will be involved in the design process, either as a core member or by providing critical reviews of the final product of the design.
- Red Teams are an integral part of a critical and creative thinking process about unique situations.
- Red Teams assist the commander and staff to visualize the problem and describe an approach to solve them.
- Red Teams help the design team to capture all perspectives and provide alternative perspectives about the problem.
- Red Teams propose solutions from various perspectives to include the adversary, partner, and others in the operational environment.

Problem Framing⁴⁰

This section contains key ideas and questions to assist Red Team during problem framing. Below are concepts and several key questions for the Red Team in the design process.

- **Problem framing** establishes an **initial hypothesis** about the character of the **friendly, adversarial, and wider environmental factors** that define the situation. Problem framing also explores **cultural narratives, institutional histories, propensities, and strategic trends** in order to postulate a general structure of the factors and their relationships. This **hypothesis** will be incomplete at first, but will **provide a basis from which the commander can visualize the design of his campaign** and begin operations to **uncover the true nature of the problems**. The hypothesis thus defines the art of the possible, warns what may be unachievable, and anticipates how the situation might evolve.
- **The art of framing the problem is the art of seeing the essential and relevant among the trivial and irrelevant;** penetrating the logic of the broad received mission and its messy contextual situation; and reshaping it into a well-enough structured working hypotheses. It requires commanders to inquire into the nature or character of the factors—friendly, opposing, and the larger environmental—that define the situation into which his command will be thrust.

⁴⁰ This is an extract of TRADOC Pam 525-5-500, Commander's Appreciation and Campaign Design, Version 1.0, 28 Jan 08. We deleted certain passages and questions. We retained the most essential ones. <http://www.tradoc.army.mil/tpubs/pams/p525-5-500.pdf>.

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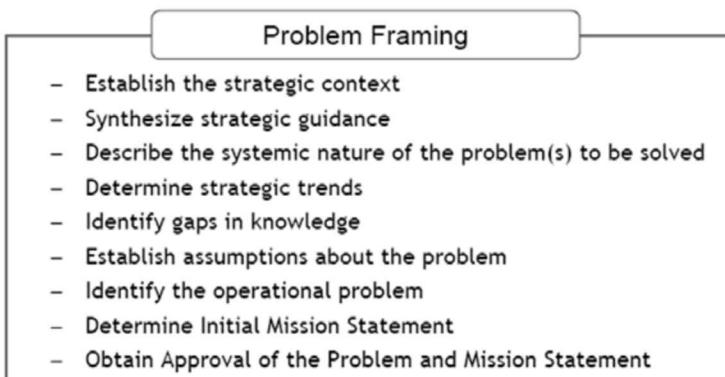


Figure 2-1. Problem Framing Tasks

(1) Establish the strategic context.

"Context establishes the reasons why the problem came to exist, its history, and how it may develop.

Consider and define both the domestic and international context:

- political and/or diplomatic long- and short-term causes of conflict
- domestic influences, including public will, competing demands for resources, and political, economic, legal, and moral constraints
- international interests (reinforcing or conflicting with U.S. interests, including positions of parties neutral to the conflict), international law, positions of inter-governmental organizations, and other competing or distracting international aspects of the situation.

When considering the strategic context, the commander should consider the following questions:

- (a) What is the history of the problem? What is its genesis?
- (b) Who are the parties interested in the problem and what are the implications of likely outcomes?
- (c) What caused the problem to come to the fore?

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- (d) Why is this emerging problem important to the nation's strategic leaders? Determine how they "see" the problem. For example:
- Are national interests and ideals at stake?
 - What are the economic considerations of action?
 - Are there treaty obligations that require or block the ability to act?

(2) **Synthesize strategic guidance:** must identify logical boundaries for the problem by establishing its essential relationship to the Nation's strategic aims.

- Do the currently tasked strategic aims/objectives vary with previously established policy and objectives? If so, why?
- What policy objectives or statements serve as potential limitations to meeting current strategic guidance?
- Determining the desired strategic ends. What strategic aims define the strategic conditions that constitute success?
- Determining the expected outcomes in terms of time and resources.

(3) **Describe the systemic nature of the problem.**

Key components include:

- (a) Defining the factors, constituents, and relationships, bearing on the problem. Consider the relationships from the points of view of the constituents:
- Friendly forces, organizations, and entities.
 - Adversaries and those opposed.
 - Neutrals—both with and without interests relative to the problem at hand.
 - Unknowns—those with clear interests and influence but whose intentions are unknown.

(b) Defining the interests and strategies of each constituent, as they understand them, and how they

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relate—positively and/or negatively—to one another, as well as to those of the U.S. Government.

(c) Defining/synthesizing the problem in terms of its constituents' systemic components:

- How are the constituent parts of the problem related and influenced in terms of capabilities, interests, and intent, from the perspective of culture, politics, social infrastructure, economy, military power, and information?
- What are the power groups and functional components of these systems?
- How do these systems relate to one another? Are there relationships to the constituent's strategic outlook? How?
- How do these systems sustain themselves?

(d) Describing the tensions in these relationships and identify opportunities for exploitation, positively or negatively, during the conduct of the campaign.

(4) **Determine strategic trending**. This activity involves describing how the strategic situation might evolve over time. What are the possible “futures” that could unfold based on current understanding?

(5) **Identify gaps in knowledge**.

(6) **Establish assumptions about the problem**.

(7) **Identify the operational problem**. Based on the tasks above, the commander must identify the critical factors of the problem that he must transform in order to satisfy strategic aims or objectives. Bounding the problem this way requires the commander to distill the essential components from the broad set of factors bearing on the problem to focus the command's efforts to the best effect.

Section V - Design & Problem Framing

- (8) Determine initial mission statement.
- (a) Express the mission in terms of who, what, when, where, and why (purpose).
 - (b) Frame the mission with a clear, concise statement of the essential task(s) and the purpose(s).

(9) Obtain approval of the problem and mission statements.

statements. The final task in framing the problem requires the commander to obtain approval of the problem statement, the rationale for the development of the problem statement, and the initial mission statement from his superior.

Conduct mission analysis after you frame the problem and the commander obtained approval of the mission statement. Unlike the traditional mission analysis described in the military decision making process—this mission analysis is just that—an analysis of the mission. This process does not result in a restated mission as the mission has been approved as a result of framing the problem.

Additional Resources on the concept of design: See “Design” in topical bibliography.

Section V - Design & Problem Framing

Notes:

SECTION VI: Plans and operations

Purpose:

This section provides several sub-sections that address the role of Red Teams during planning and operations:

- MDMP
- Assessment Process
- Validating Assumptions
- Challenges to Effective Planning

Section VI.1 - MDMP

SECTION VI.1: Military Decision Making Process

The military decision making process is a planning model that establishes procedures for analyzing a mission, developing, analyzing, and comparing course of action against criteria of success and each other, selecting the optimum course of action and producing a plan or order. The MDMP applies across the spectrum of conflict and range of military operations. Commanders with an assigned staff use the MDMP to organize their planning activities, share a common understanding of the mission and commander's intent, and develop effective plans and orders.

FM 5-0⁴¹

Field Manual 5-0, Army Planning and Orders Production, January 2005, serves as the primary reference for the Army's planning system. Red Team members must understand this planning process in order to know **how and when to influence the planning process**. Red Teams supports the wide range of operations across the spectrum of conflict and during all phases of an operation – from shaping to post-conflict stability and support operations.

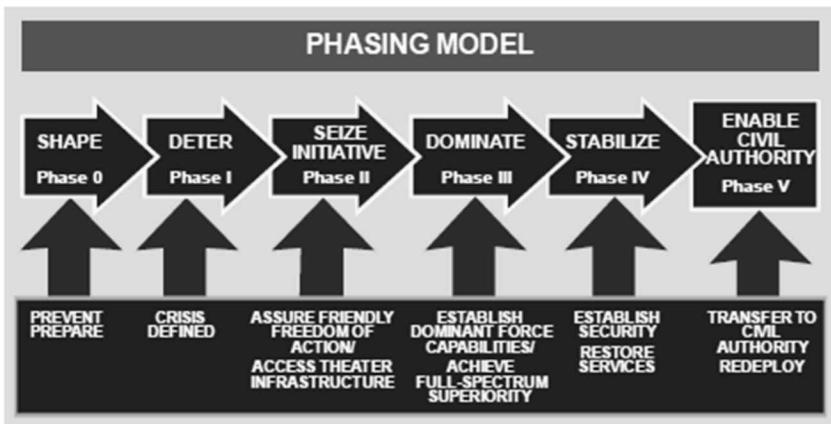


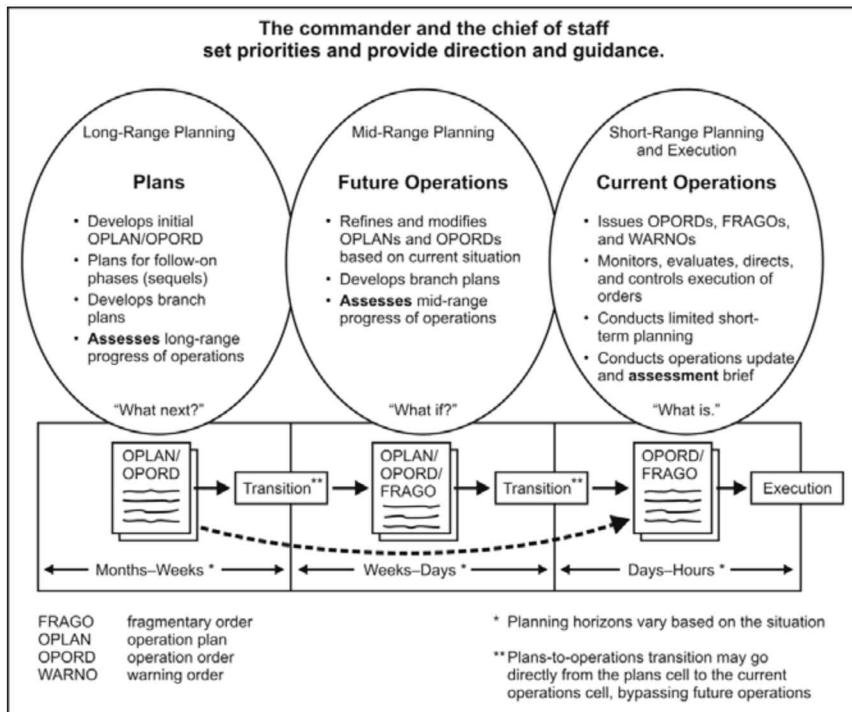
Figure IV-7. Phasing Model

⁴¹ FM 5-0, Army Planning and Orders Production, January 2005, page 3-1. Note: FM 5-0 is currently being revised as of June 2009 and we anticipate a late 2009 or early 2010 arrival.

Critical MDMP Questions for the Red Team Leader

Upon receipt of a mission, a planning directive, or commander's guidance, the Red Team Leader must determine the following, often in collaboration with the Commander/Chief of Staff:

- When should the Red Team engage in the planning process? (Most Red Teams will primarily work with Plans.)
- How should the Red Team engage? What are the expected deliverables or outcomes? Are their reporting requirements to the Commander or Chief of Staff?
- What linkage should the Red Team have within the staff? For example, does the chief of staff expect the Red Team to observe or actively participate in the wargaming process? Does he expect the RT to develop alternatives on their own for presentation to the Commander?
- What information does the Red Team need and is it available inside or external to the unit? Are their restrictions on the dissemination of information? What reachback capability does the team require?
- What is the relationship between other specialized groups on the staff (e.g. Commander's Initiative Group)?



Challenges

Red Teams face a number of challenges to “provide commanders an independent capability to fully explore alternatives to plans, operations, concepts, organizations, and capabilities in the context of the operational environment and from the perspectives of our partners, adversaries, and others.”

Challenge 1: Remaining Independent but Accountable.

While independent of the staff as a special staff element, Red Teams rely on the primary and other coordinating staffs to provide them information and must work with staff members to resolve issues, insights, and observations.

Challenge 2: Inherent tension with the staff.

There are inherent tensions with the staff who may view the Red Team’s efforts with suspicion. The Commander must

endorse the Red Team's effort. Conversely, the Red Team must carefully weigh which items require elevation to the Commander. **The Red Team is not a “shadow staff” nor does it replace any of the inherent functions performed by the staff.** Success can be judged by quality of the Red Team inputs which provides insights, perspectives, identification of vulnerabilities and unseen opportunities, as well as the team's effort to foster dialogue and communication among staffs.

Challenge 3: “Group Think versus Pro’s from Dover.”

While the Red Team is an independent staff entity, it lives and works within the unit. The team must balance its abilities to be part of the team -cooperatively working to accomplish the mission, while remaining immune to “group think.” Conversely, the team cannot be aloof or viewed as the “Pro’s from Dover.”

Challenge 4: Cookie Cutter TTP Approach. While the deliberate planning system describes a linear thinking process (e.g. Mission Analysis consists of 17 steps), no single Red Team TTP can fit all problems. For example, a red team approach to planning consideration for a humanitarian operation will differ from that of planning an offensive operation against a conventional force.

Rules of Thumb for Red Teaming Involvement in Deliberate Planning

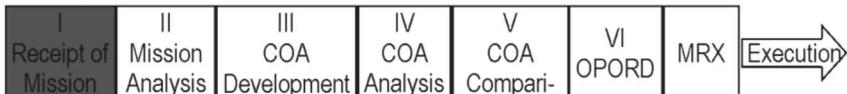
- Red Team should participate at each phase in the planning process – often without overt intervention and largely remaining in the background.
- Red Teams should avoid briefing in staffing meeting or open forums.
- The finesse and skills of the Red Team in persuasion and communication will determine their effectiveness in the planning process.
- Identify unseen opportunities, alternatives, gaps and vulnerabilities, and threats to the friendly courses of

actions that may generate development of additional branches and sequels not previously considered - determines the Red Teams “value added.”

- Timely and tailored Red Team input to the staff and the commander avoids having them move backward in the planning sequence. Early engagement is paramount.
- The echelon, size and expertise of the team, time, and the information available influences the scope of the effort and ability of the Red Team to support the planning process.
- Discuss and consider Red Team inputs at the lowest appropriate level in order to resolve, discount, or incorporate them into the plan.
- Items discounted by the staff but determined as critical to the success of the mission by the Red Team Leader should be elevated – first with the individual staff member, followed by the primary staff member, the Chief of Staff, and ultimately to the Commander (if required).

Illustrated on the following pages are the major actions completed in each step of the deliberate planning process for both “blue” planners and potential actions by the Red Team.

The Commander/Chief of Staff’s guidance, available time, and the size of the Red Team will influence the tasks to be completed.

Receipt of Mission

MDMP begins with receipt of the mission.

Blue staff actions include:

- Attend mission brief/review mission guidance and order.
- Update Staff Estimates
- Develop staff planning timeline based on time available from receipt to execution.
- Commander issues initial planning guidance for planning (e.g. abbreviated planning process).
- Warning Order issued.

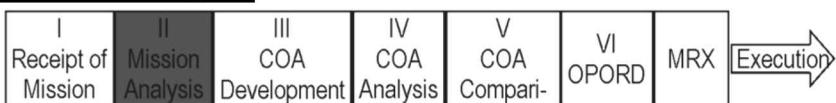
Red Team actions include:

- Attend mission brief/review mission guidance and order.
- Begin data collection and identification of information need to support OE Analysis as an internal team product.
- Based on staff planning timeline, develop preliminary RT internal product timeline (e.g., when OE Analysis is to be completed).
- Receive or recommend preliminary RT initial guidance from Commander or Chief of Staff.
- Discuss options with Chief of Plans and other key staff members on Red Team efforts.
- Determine Reachback Requirements and experts.

Red Team Tools/Questions include such items as:

- Based on the brief, construct a simple matrix using the “SWOT” formula (strengths, weaknesses, opportunities, and threats) identified in the briefing which are found in the operational environment from the US, adversary, and other perspectives. From this matrix, what are glaring omissions/gaps in the briefings/products provided?
- What are the timelines associated with the plan?
- Did the mission brief provide sufficient details to support the planning for all phases of the operation?
- Where higher headquarters assumptions identified?

Mission Analysis



Blue staff actions include:

- Analyze the higher HQ order.
- Perform initial IPB.
- Determine specified, implied, and essential tasks.
- Determine available assets.
- Determine constraints.
- Identify critical facts and assumptions.
- Perform risk assessment.
- Determine initial CCIR and EEFI.
- Determine the initial ISR plan.
- Update operational timelines.
- Write the restated mission.
- Deliver a mission analysis brief.
- Approve the restated mission.
- Develop the initial CDR intent.
- Review facts and assumptions.

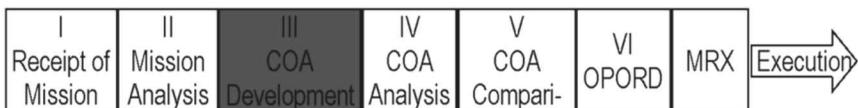
Red Team actions include:

- Participate in planning
- Assist the staff in the identification of specified, implied, and essential tasks.
- Identify higher headquarters assumptions and challenge assumptions used by the staff.
- Attend mission analysis brief.
- Identify the Enemy and US/Coalition Centers Of Gravity from their perspectives.
- Identify potential end state definitions for adversaries, coalition, and other major stakeholders.
- Continue OE/cultural analysis for use in COA Development.

Red Team Tools/Questions include such items as:

- Was the US/coalition end states clearly stated: Are their differences between the partners? Did we identify the enemy end state?
- Does the information about the OE provide sufficient detail and linkages among the variables?
- Has the higher headquarters provided any “assessment” measures that would affect formulation of the unit’s assessment system?

COA Development



Blue staff actions include:

- Analyze relative combat power
- Generate options
- Array Initial Forces
- Develop the Concept of Operations
- Assign Headquarters
- Prepare COA Statements and Sketches
- Conduct Course of Action Briefing
- Write the restated mission.
- Deliver a mission analysis brief.
- Approve the restated mission.
- Develop the initial Commander's intent.
- Review facts and assumptions

Red Team actions include:

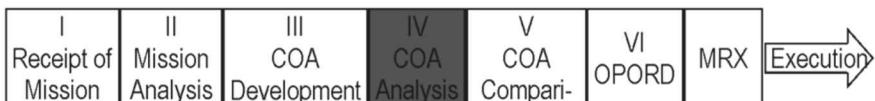
- Participate in staff development of COA.
- Identify potential consequences and 2nd and 3rd order effects of friendly and enemy COA and actions.
- Challenge proposed assumptions and accurately list all of them.
- Insure perspectives of the adversaries, partners, and others are realistically captured during the COA development (avoid mirror imaging).
- Identify the requirement for required branches to respond to identified threats and invalid assumptions.

Red Team Tools/Questions include such items as:

- Is there sufficient focus and identification of requirement for all phases of the operations (e.g. stability and support)
- Does the COA account for all variables found in the OE (e.g. PMESII-PT)?
- Is the assessment tasks sufficiently identified?

- Continually examine assumptions for validity. Is there a plan to confirm/deny them? What are the consequences/branches required? Did we consider key assumptions as potential CCIR? ISR Implications?
- Conduct a “Pre-Mortem Analysis” of the COAs.
- Conduct a “String of Pearls” Analysis.

COA Analysis



Blue staff actions include:

- Gather the tools
- List all friendly forces
- List known critical events and decision points
- Determine evaluation criteria
- Select the war game method
- Select a method to record and display results
- War game the battle and assess the results

Red Team actions include:

- Help staff determine if adequate measures are in place to measure success and how/who will provide input to the measurement.
- Monitor wargame to help insure accuracy:
 - For realistic friendly and enemy capabilities
 - For appropriate actions and results.

Or
- Assist staff by serving as the unbiased “umpire” for the wargame to arbitrate disputes.

Red Team Tools/Questions include such items as:

- 4 Ways of Seeing.
- Stakeholder Mapping – does the wargame account for the involvement/reaction/counteraction by significant stakeholders?
- Review wargame procedures and questions.

(DOD) Wargaming is a conscious attempt to visualize the flow of an operation, given own strengths and weaknesses and dispositions, enemy assets and possible COAs. It attempts to foresee the action, reaction, and counteraction dynamics of an operation. This process highlights tasks that appear to be particularly important to the operation and provides a degree of familiarity with operational-level possibilities that might otherwise be difficult to achieve. (JP 5-00.2)

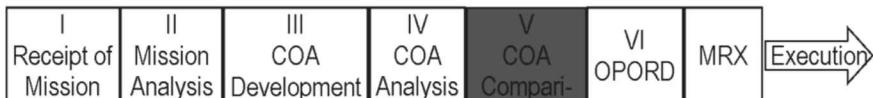
Wargames succeed or fail due for a variety of reasons. Red Teams can help the staff review the following with them:

- What are the standing operating procedures for the wargame?
- Who's in charge? XO or Chief of Staff according to doctrine – Is this reality?
- What is the role of the G5/G3 Planner – who has ownership of the plan?
- Who's the umpire? Who decides and arbitrates disputes?
- Is there sufficient time available for wargaming?

Does the wargame account for the most difficult phase or aspect of the planned operation? (E.g. for a conventional fight – river crossing/passage of lines are considered among the most difficult).

Who fights the enemy? G2? Is there significant seniority/expertise of the enemy team?

- Is the enemy's "aim and concept" placed within a larger context to see the "big picture"?
- Is the range of alternatives available broad enough for consideration (e.g. prevent deployment of US forces)?
- Are enemy capabilities wished away through the application of joint capabilities (e.g. airpower)
- Does the enemy fight realistically? What doctrine/TTP?
- What is the cultural mindset and how does it influence the ECOA?
- Based on lessons of the wargame, what changes to the intelligence estimate are required?
- What assumptions are used? What unstated assumptions are used?
- What procedures or "plays" are used based on SOP? TTP from experience? How is the OE for the current operation different from previous experience?
- Who role plays the others on the battlefield? Civilian factions, militias, NGOs, corporations?
- Who role plays the coalition or interagency partners?

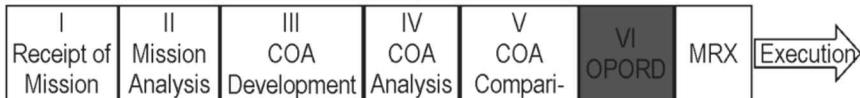
COA Comparison

Blue staff actions include:

- Conduct a COA Advantage and Disadvantage Analysis
- Compare COAs
- Develop a recommended COA

Red Team actions include:

- Monitor development of COA comparison and subsequent briefings to insure COA accounts for critical items to include:
 - ✓ the OE variables
 - ✓ assumptions
 - ✓ perspectives of coalition partners and others

OPLAN/OPORD Production & Briefing

Red Team actions include:

- If directed, conduct order's crosswalk to identify gaps, disconnects, or vulnerabilities to the plan based on critical review of the prepared order and staff annexes and appendices.
- Review the assessment plan to insure adequacy and it reflects the cultural implications associated with assessing progress.
- Review timelines for release of the order/plan for a review whether sufficient planning time is available for subordinate units.

Key Points

- *Red Teams do not normally produce a separate staff product for inclusion in the order or plan.*
- *The best measure of Red Teams value is the staff producing a better staff product and identification of alternatives to the Commander.*
- *Red Teams depend on the Commander's or Chief of Staff's guidance, the negotiations/communication skills of the Red Team, and the culture of the unit.*

Notes:

SECTION VI.2: Assessment Process

1. General:

Commanders and staffs must routinely employ measures of effectiveness and measures of performance to monitor and evaluate the situation for all spectrums of conflict.

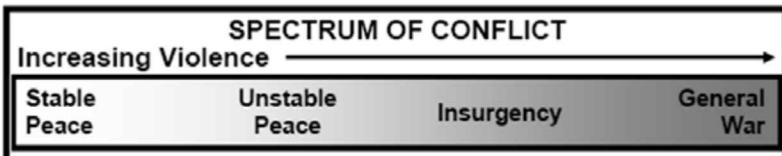


Figure 1-1. Spectrum of conflict

Assessment determines if a program or mission is accomplished. Assessment answers the simple question – “Are we winning and accomplishing our mission?”

To enable change, improve management, and increase efficiency commanders use a variety of systems and procedures to evaluate their progress. These systems and procedures range from a Balanced Scorecard System, Strategic Management System (SMS), 6 Sigma, “Dashboards” or a variety of other subjective and objective (empirical) tools and systems.

Even with a functional assessment system, the challenge to any assessment system is measuring the right things in the right ways. The critical questions associated with any assessment system are:

- What are the measures or metrics?
- Who measures?
- How often?
- How are the results displayed and who sees them.

2. Theory and Language of Assessment

Joint Publication 3-0 states:

“Assessment is a process that measures progress of the joint force toward mission accomplishment. The assessment process begins during mission analysis when the commander and staff consider what to measure and how to measure it to determine progress toward accomplishing a task, creating an effect, or achieving an objective. The assessment process

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uses **measures of performance** to evaluate task performance at all levels of war and **measures of effectiveness** to measure effects and determine the progress of operations toward achieving objectives.”⁴²

Assessment is continuous during the planning and execution process using both quantitative and qualitative data.

a. Key assessment terms and definitions used in planning and conducting military operations include the following:

assessment. 1. A continuous process that measures the overall effectiveness of employing joint force capabilities during military operations. 2. Determination of the progress toward accomplishing a task, creating an effect, or achieving an objective. 3. Analysis of the security, effectiveness, and potential of an existing or planned intelligence activity. 4. Judgment of the motives, qualifications, and characteristics of present or prospective employees or “agents.”

battle damage assessment. The estimate of damage resulting from the application of lethal or nonlethal military force. Battle damage assessment is composed of physical damage assessment, functional damage assessment, and target system assessment.

combat assessment. The determination of the overall effectiveness of force employment during military operations. Combat assessment is composed of three major components: (a) battle damage assessment; (b) munitions effectiveness assessment, and (c) reattack recommendation.

effect. 1. The physical and/or behavioral state of a system that results from military or nonmilitary actions, a set of actions, or another effect. 2. The result, outcome, or consequence of an action. 3. A change to a condition, behavior, or degree of freedom.

measure of effectiveness. A criterion used to assess changes in system behavior, capability, or operational

⁴² Joint Publication 3-0, Joint Operations, 13 September 2006 with change 1 dated 13 Feb 2008, page GL-6.

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environment tied to measuring the attainment of an end state, achievement of an objective, or creation of an effect. (Note FM 3-0 (paragraph 5-87) adds:

“Measures of effectiveness focus on the results or consequences of actions taken. They answer the question, “Is the force doing the right things, or are additional or alternative actions required? A measure of effectiveness provides a benchmark against which the commander assesses progress toward accomplishing the mission.”

measure of performance. A criterion used to assess friendly actions tied to measuring task accomplishment. (Note FM 3-0 adds: paragraph 5-86 – “Measures of performance answer the question, “Was the task or action properly performed.”)

Staffs must establish adequate assessment measures and a system for each phase of an operation.

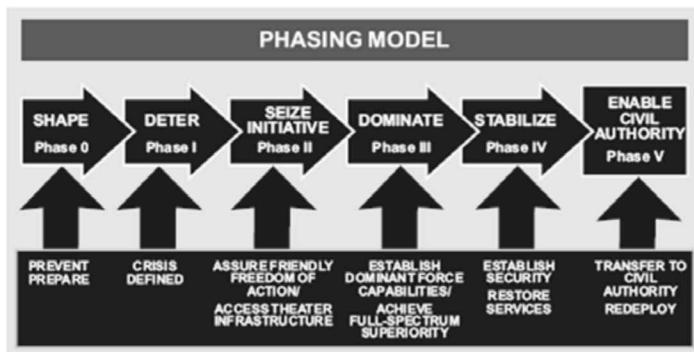


Figure IV-7. Phasing Model

b. FM 3.0, Operations adds assessment part of the operations process. It defines assessment as the “continuous monitoring and evaluation of the current situation, particularly the enemy, and progress of an operation.” FM 3-0 links assessment to effective battle command by stating:

“Assessment helps commanders better understand current conditions and broadly describe future conditions that define success. They identify the differences between the two and visualize a sequence of actions to link them.”

c. FM 3-34, Counterinsurgency contains detailed information on the use of assessment as related to counterinsurgency operations.

d. TRADOC Pam 525-5-500, Commander’s Appreciation and Campaign Design also links assessment as important in problem framing and reframing due to the inherent feedback provided by assessment.

3. Characteristics of Effective Assessment

Assessment measures must be:

- **Relevant:** Assessment measures should directly relate to the envisioned operational end-state, objective, or mission. The less precise an end state the more difficult it is to define assessment measures.
- **Appropriate:** Should reflect the operational environment; be realistic and appropriate for the echelon. As Joint Publication 3-0 notes: “As a general rule, the level at which a specific operation, task, or action is directed should be the level at which such activity is assessed.”
- **Measurable:** Assessment measures can be qualitative or quantitative. To be measurable, a baseline must be



Figure 7-2. The operations process

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established which accurately states the current situation in order to determine progress. Objective, quantitative criteria (metrics) are less subjective to error than qualitative or subjective criteria (metrics).

- **Timely:** Good assessment systems provide commanders timely feedback. Timeliness not only determines success or failure of efforts, but it also helps to reprioritize and reallocate resources as needed. Good assessment systems should be reasonable in the time required to input and use the system.
- **Numerically Reasonable:** Kept measures to a minimum to maintain focus on the most important and to enable recognition of success or failure to reallocate resources.

FM 3-0 elaborates on this point by noting:

“Commanders avoid excessive analysis when assessing operations. Committing valuable time and energy to developing elaborate and time-consuming assessments squanders resources better devoted to other operations process activities. Effective commanders avoid burdening subordinates and staffs with overly detailed assessment and collection tasks. Generally, the echelon at which a specific operation, task, or action is conducted should be the echelon at which it is assessed.”

- **Resourced:** For any effective assessment system, planners must establish:
 - Who will observe?
 - When will we observe
- How often will we observe?
- **Nested** (when appropriate) with Higher Headquarters Assessment Measures
- Systemically Displayed and Reviewed.

Additionally and specifically for Irregular Operations, an assessment system must account for the “culture and expectations” found in the Operational Environment. For example, during OIF, the information published by the coalition continually emphasized that without Saddam things would get better for the Iraqi people. COL Ralph O. Baker, commander of the 2nd Brigade Combat Team (BCT), 1st Armored Division in Baghdad during 2003 and 2004 noted

that the “time” was not on their side in meeting this expectation.

“The concept of ‘better’ proved to be a terrible cultural misperception on our part because we, the liberators, equated better with not being ruled by a brutal dictator. In contrast, a better life for Iraqis implied consistent, reliable electricity, food, medical care, jobs, and safety from criminals and political thugs.” The cultural gap between expectations of both groups was exacerbated by the proclivity of some Iraqis to believe in conspiracy theories. Some American Soldiers encountered this problem in the form of the man-on-the-moon analogy. Colonel Baker recalled repeatedly hearing the following form of that complaint: “If you Americans are capable of putting a man on the moon, why can’t you get the electricity to come on? If you are not turning the electricity on, it must be because you don’t want to and are punishing us.” Most explanations about problems with antiquated infrastructure and time required to ship in new equipment did little to regain the confidence of distrustful Iraqis.”⁴³

4. Assessment and Full Spectrum Operations

a. MCO: During major combat operations, assessment is often focused on measures associated with the defeat of the enemy force. When focused on the enemy force, assessment is primarily focused on conducting combat assessment (CA) to include battle damage assessment (BDA). As a critical component of targeting – the Direct, Decide, Deliver, Assess (D3A), the intelligence function has the primary responsibility to conduct assessment. History illustrates that during both Operation DESERT STORM and the combat phase of Operation IRAQI FREEDOM, BDA and the larger “combat assessment” processes failed to provide commanders responsive assessments of enemy capabilities.⁴⁴

⁴³ Colonel Ralph O. Baker, “The Decisive Weapon: A Brigade Combat Team Commander’s Perspective on Information Operations,” *Military Review*, May–June 2006, 19.

⁴⁴ In 2004, Admiral Giambastini, as the Commander of US Joint Forces Command, in remarks to Industry noted there were 4 “ugly areas” from the lessons learned during OIF – BDA, Fratricide Prevention, Deployment Planning and Execution Reserve Mobilization,

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b. COIN: For counterinsurgency operations, staffs often build assessment measures along lines of operation (LOO). Metrics must illustrate and link the interrelationship and progress along LOOs ranging from security to infrastructure rebuilding (as illustrated in figure 5-4).⁴⁵

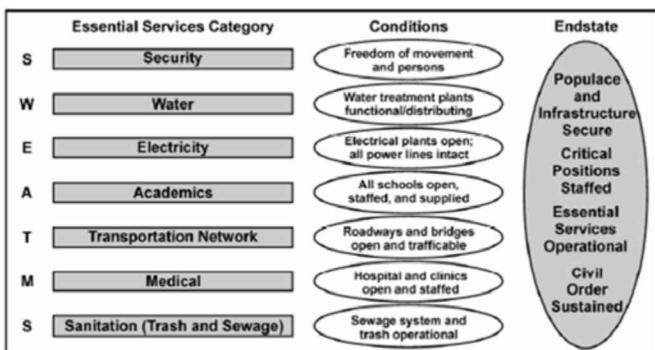


Figure 5-4. Unit application of the essential services logical lines of operations

A significant challenge is equating success solely with “empirical assessments” associated with services (re)established or provided, (re)construction efforts completed, or other type of quantifiable data. Balancing the quantifiable with the subjective is the key to successful assessment in COIN as illustrated in the two quotes below:

The two best guides, which cannot be readily reduced to statistics or processed through a computer, are an improvement in intelligence voluntarily given by the population and a decrease in the insurgents’ recruiting rate. Much can be learnt merely from the faces of the population in villages that are subject to clear-and-hold operations, if

and Coalition Information Sharing. General Tommy Franks noted in his book, American Soldier, noted “With all our advances in technology – Battle Damage Assessment (BDA) was a recurrent problem (page 460”).

45 FM 3-24, Chapter 5 provides “broad indicators of progress” and other examples. MG Chiarelli and MAJ Michaelis’s article, “Winning the Peace – The Requirement for Full-Spectrum Operations,” Military Review July – August 2005, provides a discussion between specific actions and provides assessment examples.

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these are visited at regular intervals. Faces which are at first resigned and apathetic, or even sullen, six months later are full of cheerful welcoming smiles. The people know who is winning.

Sir Robert Thompson

Defeating Communist Insurgency: The Lessons of Malaya and Vietnam⁴⁶

Former CJCS General Peter Pace in an interview noted the following: As the CJCS, he would often receive stacks of statistics and other data - on any given day measuring progress in Iraq - which in turn could be interpreted in any number of ways.

In his opinion, assessing progress in Iraq there were only two essential measurements in the form of questions measured through the opinion of the average Iraqi citizen, namely:

- Are you better off today than you were yesterday?
- Do you think you'll be better off tomorrow than you are today?

He noted if the answer to these two questions was yes – then he thought you could make the case we were winning.⁴⁷

Consideration of coalition partners, host government, and other US government agencies and departments' inputs on agreed measures of effectiveness facilitate unity of effort. Doctrine, procedures, practical experience, and other inter-agency and department criteria are available to provide a baseline for assessment for certain missions.⁴⁸

5. Red Team Responsibilities.

As a specified task, the Red Team assists the commander and the staff in the assessment process by:

- helping the staff determine if they are assessing the right things
- providing independent critical reviews of the assessment processes within the organization to determine if

⁴⁶ FM 3-24, Counterinsurgency, page 5-24.

⁴⁷ Interview with General (ret) Peter Pace and Barry McCaffrey by John Penata on 5 May 08 (CSPAN).

⁴⁸ The Department of State Office of the Coordinator for Reconstruction and Stabilization is working to establish a common interagency task matrix and supporting metrics, to support stability and reconstruction operations. For further information see DOS web site <http://www.state.gov/s/crs/>

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adequate assessment resources and procedures are established

- conducting and hosting a dialogue among the intelligence planners and analyst of how an adversary might assess their operations which may provide clues as to current and future enemy courses of actions
- aiding the staff to account for partners' perspectives which shape the assessment process and measures
- insuring cultural considerations and expectations are reflected in the assessment process specifically in a COIN environment.

As a prerequisite, Red Teams must understand the theory and language of assessment and who and how their unit conduct assessment through the study of the unit standing operating procedures (SOPs). While doctrine and staff organizations do not normally provide a “separate establish cell” to perform assessment functions, many units establish an “ad hoc” cell or working group to do it. Red Teams should also interface with the Operations Research and Systems Analysis personnel assigned to the division and higher headquarters who may provide insights and input on assessment.

6. Key Questions. Key assessment questions for Red Team

- Are the proposed measurements of effectiveness clearly linked to the strategy, mission, or end state?
- Does the measurement have a clear start point (baseline) in which to measure progress?
- Does the measurement system incorporate higher headquarters metrics? Are the unit's tasks developed to local conditions?
- What is the level of coalition or interagency agreement to the assessment measures? If no agreement, what are the implications?
- Who has primary responsibility for assessment? Has the task (who, what, when, where) been established?

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- Has key assessment measures been included in the unit's CCIR?
- Do the metrics reflect a cultural sensitivity, whereby important things are measured? From the civilian population perspective, does the U.S. MOE matter (e.g. Maslow Theory - electricity vice elections)? What are the expectations of the people in terms of patience for process?
- From the enemy's perspective, what are their measures of effectiveness? Does our MOE's measure what is important to him?

7. Summary

Linked to a realistic strategy and plans, an effective assessment system links quantitative and qualitative evidence and provides a powerful tool to not only determine progress but also enables commanders to make real time adjustments to the plan and shift resources as required. Staffs may also link assessment to a phasing of an operation or as needed to transitions.

Notes:

SECTION VI.3: Validating Assumptions

1. General:

“All planning is based on imperfect knowledge and involves assumptions about the future. All planning by definition is future oriented, and the future by nature is uncertain. No matter how determined we are to be fully prepared for a situation, there are finite limits to our ability to plan for the future. The more certain the future is, the easier it is to plan.”⁴⁹

Good assumptions support good decision making and problem solving. Conversely, if assumptions are unsupportable or based on faulty reasoning or knowledge, they can result in poor decision making and problem solving.

The Army’s history of OPERATION IRAQI FREEDOM clearly illustrates the importance of assumptions in the planning process.

“In retrospect, assessment of the planning for OIF must focus on the way the set of assumptions made by US Government officials and military commanders about the postwar situation in Iraq shaped the planning process. All military plans rest on a set of assumptions to a greater or lesser degree, and the famous dictum that “no plan survives contact with the enemy” would clearly apply in the spring of 2003. While planners can never expect their conjectures to be wholly accurate, they are supposed to be lucid, well-reasoned assumptions based on intelligence, commander’s guidance, doctrine, and policy.”⁵⁰

2. Red Team Task:

During planning, Red Teams assist the commander and staff by:

- **Challenging assumptions** - helping the staff to identify invalid and unneeded assumptions
- Assisting in **identifying needed assumptions** to further the planning process

⁴⁹ United States Marine Corps, MCDP 5, Planning. 21 July 1997, pg. 20.

⁵⁰ Wright, Donald P. Dr, Colonel Timothy R. Reese with the Contemporary Operations Study Team, ON POINT II: Transition to the New Campaign: The United States Army in Operation IRAQI FREEDOM May 2003–January 2005, Fort Leavenworth, KS: Combat Studies Institute, 2008, pg 79.

- **Identifying** when the staff has defaulted to an unstated assumption – specifically during the wargame
- Offering **alternatives and insights to assumptions** about the adversary and others in the operational environment
- **Identifying** when the staff needs to develop a **branch** to the plan in case a key assumption proves invalid

3. Definitions:

Joint Publication 1-02, 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.”⁵¹

FM 5.0 further refines this definition by noting:

“An assumption is information accepted as true in the absence of facts. This information is probably correct, but cannot be verified. Appropriate assumptions used in decision making have two characteristics:

- They are valid, that is, they are likely to be true.
- They are necessary, that is, they are essential to continuing the problem solving process.

If the process can continue without making a particular assumption, it is discarded. So long as an assumption is both valid and necessary, it is treated as a fact. *Problem solvers continually seek to confirm or deny the validity of their assumptions.*⁵²

4. Sources of Assumptions:

Staffs base assumptions on a lack of factual evidence and uncertainty necessary for planning to continue.

⁵¹ Joint Publication 1-02, DOD Dictionary of Military and Associated Terms, 14 April 2006, pg 50.

⁵² Department of the Army, Field Manual 5.0, Army Planning and Orders Production, January 2005, pg 3-20. For details on assumptions used in problem framing and campaign design, see TRADOC Pamphlet 525-5-500, Commander's Appreciation and Campaign Design, dated 28 January 2008.

Section VI.3 – Validating Assumptions

For military operations, assumptions often relate to:

- Enemy forces – strengths or dispositions
- Weather
- Specific terrain considerations that significantly affect the feasibility of the course of action
- Deployment time, assets, availability, and access to airfields and ports
- Risk
- Date and level of mobilization for reserve and National Guard forces
- Cultural implications (e.g., how the population views US/coalition involvement)
- Post – conflict conditions

For problem solving, assumptions often deal with resources, support, and relationships.

For concept development, specifically in the force development arena, assumptions often address conditions anticipated to be prevalent in the future – 5 – 15 years.⁵³

5. Key Questions to Challenge Assumptions:

- ***Do the assumptions made during the planning process meet the standards for an assumption?***
- ***Is the assumption a fact?***

Assumptions are points of information that are likely to be correct but when made cannot be verified. If valid, most assumptions will become facts and serve as “way points” in determining the validity of the plan.

- ***Is the assumption an opinion?***

⁵³ A good example of how an analyst questioned a concept against the assumptions made in the concept is found in Rapid Decisive Operations – An Assumptions-Based Critique by Antulio J. Echevarria II, November

2001 found at <http://www.carlisle.army.mil/ssi/pubs/chron.cfm?year=2001> accessed on 21 July 2005.

Section VI.3 – Validating Assumptions

Army doctrine recognizes “opinion” as a reflection of the personal judgment and experiences of those involved in planning, however, accept opinions neither as facts nor as assumptions.

- Are the assumptions based on preconception, bias, or historical analogy? Are they relevant and/or accurate?
- Is the assumption logical given what is known about the enemy (equipment, doctrine, and TTP), weather, and terrain? Does the assumption reflect reality found in the Operational Environment?

Broad assumptions without an understanding of their sub-level components may lead to faulty assumptions.

For example, a staff can only assume a BCT will be available to a theater commander in 30 days given adequate preparation, load, and travel time. Ports and airfields must have favorable weather unencumbered by the enemy. The staff should continually question whether their assumptions are valid using the variables found in the operational environment or similar construct.

Two previous operations illustrate the challenges inherent to any operation when planning assumptions prove false.

“In the case of OIF, the postwar situation in Iraq was severely out of line with the suppositions made at nearly every level before the war. The V Corps commander, Lieutenant General Wallace, asserted that the assumptions made by planners about the Iraqi infrastructure and society after the conflict were particularly damaging to the Phase IV plan:

I believe the things that we assumed would be in place on the ground that make Phase IV operations extraordinarily easy if they are there or extraordinarily hard if they are not had most to do with Iraqi institutions and infrastructure. We made the assumption that some of those institutions and some of that infrastructure would be in place upon our arrival, regardless of the presence of the regime or not. The criticality of those assumptions was such that when the regime ceased to exist or

Section VI.3 – Validating Assumptions

ceased to dominate the areas in which we were operating, then all of those institutions and all of that infrastructure ceased to operate at the same time.

Wallace succinctly concluded, “We had the wrong assumptions and therefore we had the wrong plan to put into play.”

ON POINT II⁵⁴

Another example, assumed access by a friendly nation to ports and airfield to support closure into a region – requires continual checks to insure the assumption isn’t wishful thinking but is grounded in reality. Throughout the lengthy planning effort for Operation Allied Force in 1998-99, allied leaders and planners widely adhered to a significant assumption. When the order arrived to execute the operation – on the very eve of hostilities – that assumption continued to prevail. But as the days of the aerospace campaign stretched into weeks and then months, the allies recognized their assumption for the fallacy it was – namely, that President Slobodan Milosevic of Yugoslavia would capitulate after a “modest set of punitive air strikes...”

COL Malone, USAF
OPERATION ALLIED FORCE⁵⁵

- ***Has the staff a procedure that is used throughout the planning and preparation (and potentially portions of the execution phase) that continually examines whether assumptions are valid?***

A technique is to establish validation points throughout the planning process to insure:

- assumptions remain valid
- assumptions proven as facts are deleted
- assumptions proven invalid are discarded - requiring re-examination of the feasibility of the plan or development of branches.⁵⁶

⁵⁴ Wright, Donald P. Dr., Colonel Timothy R. Reese with the Contemporary Operations Study Team, ON POINT II: Transition to the New Campaign: The United States Army in Operation IRAQI FREEDOM May 2003–January 2005, Fort Leavenworth, KS: Combat Studies Institute, 2008, pages 79 – 80.

⁵⁵ Malone, Timothy G., Col, “The Red Team” Forging a Well-Conceived Contingency Plan, Aerospace Power Journal, Summer 2002, page 22.

- ***Is the assumption appropriate to the level of planning?***
- ***Are there assumptions made implicitly during planning but not stated or assumptions made by the staff but not included in the plan?***

Unstated assumptions (explicit or implicit) can fault a plan from the beginning and do a disservice to the commander and the planning process.

- ***How is the staff addressing assumptions included in higher headquarters plans?***

There are no clear rules on how subordinate headquarters should treat higher headquarters assumptions. One option as noted in the Joint Staff Officer's Guide is to treat the higher headquarters assumptions as if it were a fact.⁵⁷ The other option is to list them as assumptions to the plan.

- ***How many assumptions are acceptable?***

There is no rule that defines the correct number of assumptions. They must meet the criteria for a valid assumption. The more assumptions made in a plan implies higher risk and an increased chance of having a faulty plan. As noted General (ret) Anthony Zinni USMC: "I would always

⁵⁶ Woodmansee (et al), "The Need to Validate Planning Assumptions," Military Review, Jan – Feb 2005 pg 61. The authors advocate the need for a system to establish validating points throughout the planning process to insure the planning assumption remains valid. Using the assumption that Turkey would support OIF by providing access to ports and airfields, the authors illustrate that by using a system to validate the assumptions – would have clearly demonstrated over time – the invalidity of the assumption. This approach is similar to the RAND Assumption Based Planning process – where planners would define signposts to insure the validity of an assumption over time. The RAND Study – Assumption Based Planning – A Planning Tool for Very Uncertain Times – is found at <http://www.rand.org/ARD/pubs/monographs/1999.html> accessed on 21 July 2005.

⁵⁷ Joint Forces Staff College, JFSC Publication 1. The Joint Staff Officer's Guide 2000, pg 4-38.

challenge assumptions very vigorously as the commander in chief (CINC). We have too many (assumptions). Many are pointless and some assume away problems.”⁵⁸

6. Intelligence and Assumptions:

Intelligence analysts often have to fill in gaps in knowledge with assumptions about enemy forces, weather, and terrain. The intelligence estimate supporting the operation should clearly identify these assumptions. The challenges for the intelligence professional are threefold:

- avoid confusing assumptions as facts
- keep assumptions to a minimum, challenge them continually, and assumptions must reflect the culture, doctrine, TTP, and realistic enemy capabilities
- the ISR plan must reflect the requirements to confirm or deny these assumptions using available intelligence, surveillance, and reconnaissance (ISR) assets

7. Key Points

- All planning or problem solving is based on uncertainty - often requiring assumptions.
- Assumptions must be logical, realistic, and considered likely to be true to be valid.
- Too many assumptions result in a higher probability that the plan or proposed solution may be invalid.
- ***The use of assumptions requires the staff to develop branches and sequels if the assumptions prove false.***
- Often an unstated assumption may be more dangerous than stated assumptions proven wrong.

⁵⁸ Woodmansee, Peter D. LTC, Faulkner, Timothy L. LTC, and Major Wayne C. Blanchette, “The Need to Validate Planning Assumptions,” Military Review. January – February 2005, pgs 58 - 62.

Section VI.3 - Validating Assumptions

Notes:

SECTION VI.4: Challenges to Effective Planning

1. Purpose:

Many traps can adversely affect the planning process. Red Teams help commanders and staffs identify and understand flawed reasoning and logic. Red Teams also help identify when organizational processes contribute to the potential for errors in the planning and decision making processes. Red Teams assist the commander to critically examine the group's planning and decision making to avoid many of these critical thinking traps. These traps can result in poor planning, bad decisions, lost opportunities, and increased vulnerabilities for the unit. This section helps Red Teams understand these traps.

Numerous studies, scholarly articles, and books have been written about critical thinking and the organizational dynamics involved in decision making. Joint Publication 3-0 Joint Operations and FM 3-0 Operations both contain sections on the challenges facing decision makers and their organizations.

JP 3-0, Joint Operations, identifies the importance of the cognitive dimension noting:

“The **cognitive dimension** encompasses the mind of the decision maker and the target audience. This is the dimension in which **commanders and staff think, perceive, visualize, and decide**. Battles and campaigns can be lost in the cognitive dimension.”⁵⁹

Any number of variables can cause errors in reasoning, critical thinking and planning to include:

- Level of group cohesion
- Strong directive leaders
- Time
- External threats
- Pressures towards conformity

⁵⁹ Joint Publication 3-0, Joint Operations, 17 September 2006, Incorporating Change 1 13 Feb 2008, page II -21.

Section VI.4 – Challenges to Effective Planning

- Situational understanding⁶⁰
- Poor preparation and organization for planning (e.g. lack of developed standing operating procedures for wargaming)
- Poor Information management (e.g. inaccurate or incomplete displays of visualization and dissemination of information).

A cohesive staff is a force multiplier. At the same time, a cohesive staff may **stifle dissent** which if exposed could improve planning and possibly nullify ill-conceived proposed course of action. This is a classic place for a Red Team to interact with the staff to help expose this challenge to effective planning. Simultaneously, Red Teams must help maintain the dynamics of the cohesive staff.

Strong leaders under **time pressure** may direct a course of action thereby limiting the options for staff consideration. Doctrine cautions leaders to avoid directing a course of action early in planning process that prevents the staff in identifying other better appropriate courses of action.

Lastly, no matter how cohesive the group, a lack of planning time, inexperience in the operational environment, and poor situational understanding lead to faulty plans.

Although not a complete list, some of the major cognitive challenges to planning include:

- Groupthink
- Tyrant of the Current
- Paradigm Blindness
- Trends Faith
- Mirror Imaging
- Cultural Contempt/Misunderstanding
- Tyranny of the Optimistic and Pessimistic

⁶⁰ Johnson, Phillip M. Major. Effects of Groupthink on Tactical Decision Making, School of Advanced Military Studies, United States Command and General Staff College, Fort Leavenworth, KS, AY 00-01, pages 28-31.

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- Oversimplifying and Tunnel Vision
- Faulty Perceptions/Mindsets
- Unstated and False Assumptions
- Use of Flawed (historical) Analogy
- Overconfidence in the Ability to Predict the Future, Consequence, and 2nd and 3rd Order Effects.⁶¹

2. The “Challenges”:

a. Group Think:⁶²

Field Manual 5-0 notes groupthink occurs when “individuals allow a desire for solidarity and unanimity within a group to override their motivation to realistically appraise alternative courses of action.”

Whether because of habit, fear, or working on preconceived opinions, groupthink impedes the discovery of alternatives and understanding of complex operational environments.

When assigned to a unit, Red Team members must not only be aware of the dynamic of groupthink, avoid falling into it themselves, and seek out unstated contrarian staff views that can identify an undiscovered vulnerability, an unseen opportunity, and unexplored courses of action.

b. Tyranny of the Current:

The situation often changes after conducting MDMP but the unit continues executing its’ original plan. Often this becomes “fighting the plan and not the enemy.” The staff may adhere “this is it”⁶³ even with well-developed branches

⁶¹ Authors Note: One could add many more potential challenges or errors in thinking/reasoning and organizations processes other than the short list found in this document, however, this list highlights the most important and most appropriate for military organizations.

⁶² FM 5-0, Army Planning and Orders Production, January 2005, page 2-4, paragraph: 2-15 – 2-18 addresses the issue of groupthink.

⁶³ Mika Mannermaa in “Traps in Futures Thinking-and How to Overcome Them” in Thinking Creatively in Turbulent Times (Editor Howard F. Didsbury, Jr.), World Future Society, Bethesda, Maryland, 2004, page 42 discusses this idea as a “this is it” error specifically when thinking about the future.

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and sequels due to the investment in time, pride in ownership, and time.

New concepts, experiments, or designs often surface as the only solution to a problem. Red Teams should continually question the premises that the proposed design or technology is the only solution to the problem.

c. Paradigm Blindness:

A paradigm is a mode or pattern of thought. In planning, it often takes the disguise of “we’ve always done it this way” mentality.

In a complex environment, the challenge for US forces is to adapt based on prior experience of what works in one situation to another situation. The challenge is to know also when to discard it and start anew without discarding the basic principles that govern success.

As Major Tim Karcher notes in Understanding the Victory Disease, the attitude among some staffs could be:

“Why change what has worked in the past?” The greatest danger when using established patterns lies in the enemy’s reaction. Setting a pattern is fine as long as the enemy follows with his own patterns and reacts in a predictable fashion. A considerable danger occurs, though, when the enemy deviates from his normal reaction, placing the friendly force at a significant disadvantage and causing the supposed recipe for success to turn into a recipe for failure.”⁶⁴

The Red Team challenge is to help the staff think about “what’s next” or “what could potentially occur” – balancing realism with imagination.

d. Mirror Imaging:

Mirror imaging occurs when you apply your attitudes about trends, capabilities, beliefs, culture to another. Analyst fell into this trap during the planning for OIF. As noted in the

⁶⁴ Karcher Timothy MajorUSA. Understanding the “Victory Disease,” From the Little Bighorn to Mogadishu and Beyond. GWOT Occasional Papers #3. Combat Studies Institute. Combat Studies Institute Press, Fort Leavenworth, Kansas, page 2.

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report on the miscalculation of Iraqi WMD capabilities, it noted:

“Analysis of Iraq’s weapons programs took little account of Iraq’s political and social context. While such a consideration would probably not have changed the Community’s judgments about Iraq’s WMD, the failure even to consider whether Saddam Hussein had elected to abandon his banned weapons programs precluded that possibility.

It seems unlikely to us that weapons experts used to combing reports for tidbits on technical programs would ever have asked: “Is Saddam bluffing?” or “Could he have decided to suspend his weapons programs until sanctions are lifted?” But an analyst steeped in Iraq’s politics and culture at least might have asked those questions, and, of course, those turn out to be the questions that could have led the Intelligence Community closer to the truth.”⁶⁵

The culture and objectives of others nations and other transnational groups differ from ours. Our assumptions, assessments, and estimates of adversary courses of action need to account for these differences.

We work hard to avoid the tendency to mirror imaging US intentions, motivations, thought processes, and capabilities to the enemy. It is just as important not to apply mirror imaging to partners and others within the operational environment.

e. Trends Faith:

Studying trends has many useful purposes. However, the challenge is to understand when changes in the operational environment negate the usefulness of past trends for projecting future developments. Military history contains numerous examples of countries refuting past trends to field new dominating technology or concepts (e.g. development of carrier aviation and the concept of Blitzkrieg to defeat French stationary defenses).

f. Cultural Contempt and Misunderstanding:

⁶⁵ Report to the President by the Commission on the Intelligence Capabilities of the US Regarding WMD, 31 March 2005, page 173.

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Unlike mirror imaging, this error recognizes the existence of adversary and partner cultural differences. This error then discounts, holds them in contempt, misunderstands, or misapplies them. Cultural contempt reveals itself in arrogance. People often underestimate the capabilities and motivations of others. One historical example:

“At the tactical level, the 7th Cavalry displayed remarkable overconfidence, clearly demonstrated by how Custer viewed his Indian adversary. During the 1868 Battle of the Washita, when a subordinate speculated they might find more Indians than they could handle, Custer reportedly said, “There are not enough Indians in the country to whip the Seventh Cavalry.” Custer’s conceit seems to have trickled down to his subordinates, causing them to also believe in their indestructibility.”⁶⁶

The challenge for the commander and staff is to understand the culture of the adversary, as well as our partners and others. Then staffs must apply this understanding to the assumptions made and the assessments created.

g. Tyranny of the Optimistic and Pessimistic:

Those who see a course of action or new technology as either **too easy** or **too hard** overwhelm the group. The cause for this error is failing to understand reality and the complexity of the environment or endeavor.

As Dietrich Dorner noted:

“If we want to operate within a complex and dynamic system, we have to know not only what its current status is but what its status will be or could be in the future, and we have to know how certain actions we take will influence the situation.”⁶⁷

Red Teams challenge staffs understanding of the reality found in the current environment. They also help the staff understand the limitations of its own projections and estimates.

⁶⁶ Karcher Timothy Major USA. Understanding the “Victory Disease,” From the Little Bighorn to Mogadishu and Beyond. GWOT Occasional Papers #3. Combat Studies Institute. Combat Studies Institute Press, Fort Leavenworth, Kansas, page 40.

⁶⁷ Dorner, Dietrick. The Logic of Failure: Recognizing and Avoiding Errors in Complex Situations. Cambridge, Mass: Perseus Books, 1996. (English Translation), page 41.

h. Tunnel Vision and Oversimplifying:

The challenge for any staff, but specifically for intelligence staffs, is connecting the “dots” or “threads” to a complex problem with many variables. This is even more difficult when planning under time constraints and where the staff’s lacks integration -“working in their own staff perspective and various lanes.”

Red Teams can help identify occurrences of oversimplification and tunnel vision. Red Teams can pick up early warning signs by listening for what staffs do not discuss or address in planning and backbriefs. This ability extends from the Red Team freedom from producing a specific set of staff “products”. The Red Team has the luxury to “holistically” view the problem and make connections to facts, assessments, and conclusions influencing the units’ planning.

i. Faulty Perceptions/Mindsets:

Richard J. Heuer in his work Psychology of Intelligence Analysis noted, “We tend to perceive what we expect to perceive”. In other words, our mission; organizational climate; culture; self interest; assumptions; prejudices; doctrine; and attitudes influence our thinking.

As individuals receive new information and data, they perceive them in existing images governed by these factors. Continually asking, “What does this mean?” and, “How else can I perceive it?” can offer critical insights.

David C. Gompert and Richard L. Kugler note a classic case study of this failure to perceive change. They analyzed Lee’s decision to order (on July 3, 1863, the 3rd day of the Battle of Gettysburg), a frontal assault across a mile of open field against the strong center of the defending Union forces. The authors argue that Lee depended too much on his experience from previous battles such as at Chancellorsville. That when pressed, Union forces would collapse. Lee ignored the fact that the Union forces learned lessons from

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these battles. Lee underestimated their training and commanders. He ignored the latest information that a significant Union force was entrenched with significant reserves available.

j. Using False or Unstated Assumptions:

False or unstated assumptions derail planning. While all planning requires assumptions, planners should judge assumptions as most likely true and should keep them to a minimum to avoid wishing away problems. A system must be in place that continually examines the accuracy of the assumptions. Planners must also establish contingency planning must in case key assumptions prove invalid. Even the most senior staffs can fall into this trap, as noted in ON POINT II:

It appears that most senior civilian and military leaders failed to review the historical records of military occupations and of Middle Eastern or Iraqi history, and also failed to listen and evaluate outside views about potential weaknesses with their planning assumptions⁶⁸

When a staff section uses an unstated assumption, it deprives others from preparing contingencies in case it proves untrue.

k. Use of Flawed (historical) Analogy

Webster defines analogy as “a form of logical inference, or an instance of it, based on the assumption that if two things are known to be alike in some respects, then they must be alike in other respects.” As one author noted, “When confronted with a novel challenge, the human mind reasons by analogy. We then become prone to reading the world in ways that reaffirm the choice we have made.”⁶⁹

⁶⁸ Wright, Donald P. Dr, Colonel Timothy R. Reese with the Contemporary Operations Study Team, ON POINT II: Transition to the New Campaign: The United States Army in Operation IRAQI FREEDOM May 2003–January 2005, Fort Leavenworth, KS: Combat Studies Institute, 2008, page 569.

⁶⁹ Garfinkle, Adam. “How We Misunderstand Terrorism,” Foreign Policy Research Institute, 3 September 2008, available at <http://www.fpri.org>.

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When used successfully, analogies help make sense of a new situation, reduce complexity, and aid in the dialogue with others.⁷⁰

Decision makers often use history and historical analogies. Numerous studies to include Richard Neustadt and Ernest R. May's Thinking in Time: The Uses of History for Decision Makers highlight the challenge and potential errors of using history and historical analogy in decision making without truly understanding the history being used and the understanding or disregarding the differences between the current and past situations.

History shapes our thinking. For example, General Keane, the VCSA during planning for OIF, noted the following in hindsight:

“The essential problem with Phase IV was we never ever seriously considered that leaders of the regime would not surrender. If we occupied the capital and took down his military capability, essentially having physical and material control, we did not consider it a realistic option that they would continue to attack us indirectly. And shame on us for that.”⁷¹

I. Hubris and Overconfidence

Flawed planning takes place when staffs are overconfident in our ability to predict the future or the precise consequence and 2nd and 3rd order effects of our actions. History proved that even the most seasoned commanders and staffs could succumb to overconfidence in their ability to anticipate their adversaries.⁷²

⁷⁰ An economist opposed to the October 2008 \$700 billion dollar bailout based on the reasoning that banks were in crisis used the analogy that is like saying “Let’s drain the lake because three boats are sinking.” Regardless of agreement – the use of the analogy was clear and to the point – avoiding the jargon and complexity of the situation.

⁷¹ Wright, Donald P. Dr, Colonel Timothy R. Reese with the Contemporary Operations Study Team, ON POINT II: Transition to the New Campaign: The United States Army in Operation IRAQI FREEDOM May 2003–January 2005, Fort Leavenworth, KS: Combat Studies Institute, 2008, page 132.

⁷² One such case is described by Evan Thomas in his book, Sea of Thunder describing the actions of Admiral Bill Halsey and his Japanese counterparts in the Battle of Leyte

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More recently, Secretary of Defense Robert Gates quoted the American historian Gordon Wood who said, “History does not teach lots of little lessons. Insofar as it teaches any lessons, it teaching only one big one: that nothing ever works out quite the way its mangers intended or expected.”⁷³

Some scholars argue that it is nearly impossible to predict the future or understand the complexity of the situation.

Nicholas Taleb argues in The Black Swan: The Impact of the Highly Improbable, the only real solution is to have planning systems in place that can react quickly to changes and events.⁷⁴

Summary

Helping the commander and staff determine when their reasoning is flawed or when organizational processes impede sound planning is one of the tasks for a Red Team.

A challenge for the Red Team is maintaining the “intellectual distance” to observe and highlight potential errors in reasoning while at the same time being embedded in the

Gulf . In this naval battle, which is considered a classic for study by military scholars, an experienced commander were wedded to a preconception, shaped by US military culture, past experience fighting the Japanese, and a failure to consider other possibilities. Thomas, Evan. Sea of Thunder: Four Commanders and the Last Great Naval Campaign 1941-1945, New York: Simon and Schuster, 2006.

⁷³ U.S. Department of Defense, Office of the Assistant Secretary of Defense (Public Affairs), Oxford Analytica (United Kingdom) As Delivered by Secretary of Defense Robert M. Gates, September 19, 2008, found at

<http://www.defenselink.mil/speeches/speech.aspx?speeid=1275> accessed on 25 September 2008 (Gates). He went one to discuss the oft quoted lessons from Munich of the dangers of “appeasement” and the lessons of miscalculations, nationalism and hubris which led to WW I. He concluded: “For much of the past century, Western psychology, rhetoric and policy-making on matters of war and peace has been framed by, and often lurched between, these two poles – between excessive pressures to take military action and excessive restraint, between a too eager embrace of the use of military force and an extreme aversion to it.”⁷³ He concluded that the “lessons of history” may be over learned

⁷⁴ Taleb, Nassim Nicholas. The Black Swan: The Impact of the Highly Improbable. New York: Random House, 2007. (4/20/2011)

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organization and a participant and contributor to the process. Planning, specifically when dealing in unique, novel, and unexpected situations challenges the most experienced commander and staff officers. As Dietrich Dorner noted:

"...we can liken a decision maker in a complex situation to a chess player whose set has many more than the normal number of pieces, several dozen, say. Furthermore, these chessmen are all linked to each other by rubber bands, so that the player cannot move just one figure alone. Also, his men and his opponent's men can move on their own and in accordance with rules the player does not fully understand or about which he has mistaken assumptions. And to top things off, some of this own and his opponent's men are surrounded by a fog that obscures their identity."⁷⁵

Notes:

⁷⁵ Dorner., page 42.

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Notes: _____

SECTION VII: Culture

Purpose: This section:

- Provides memory aides to examine a culture and better understand, influence, and achieve mission success.
- Assists you in developing a series of questions that will better enable both you and the command to assess the cultural environment.
- Helps red teams understand culture and develop the capacity to think reflexively to escape the trap of ethnocentrism.

"I don't think we should study things in isolation. I don't think a geographer is going to master anything, or an anthropologist is going to master anything, or a historian is going to master anything. I think it's a broad-based knowledge in all these areas. The ability to dissect a culture or an environment very carefully and *know what questions to ask*, although you might not be an expert in that culture, and to be able to pull it all together. Again, an intelligence analysis that isn't an order-of-battle, militarily-oriented one, but one that pulls these factors together that you need to understand..."I mean, as simple as flora and fauna all the way up to basic geographic differences, environmental differences – cultural, religious and everything else. That becomes your life as a planner, or as the director of operations, and as the key decision maker."⁷⁶

Why Anthropology?

Anthropology is the study of human beings. Cultural anthropology is a subfield of anthropology that studies the theory on the way groups of people behave.

Anthropology assists us to battle the human predisposition towards ethnocentrism – a belief in the superiority of one's own culture. Cultural anthropology also struggles with reconciling the fact that every individual is unique with the notion that 'cultural configurations' or national character exists. This national character is related to the institutions

⁷⁶ "Non-Traditional Military Missions: Their Nature, and the Need for Cultural Awareness & Flexible Thinking" MAJ Gen Anthony C. Zinni in Joe Strange, *Capital "W" War: A Case for Strategic Principles of War*. Quantico, VA: Marine Corps University, 1998, pg 282.

extant in the society and these institutions collectively enculturate new members of the society with acceptable norms. Enculturation affects how members of society think (cognitive style), how they emote, and their general worldview.

Use of this chapter

There is no universal method for translating cultural apperception into an action plan. In many cases, it is a matter of laying out as much pertinent data as possible in a variety of different ways. Then one must look for themes that conform to your underlying theory of how the society works.

Ruth Benedict set out to understand the culture of the Japanese in support of military planners during WWII. Though she is largely discredited, one must at least take note of the fact she never traveled to Japan. She used the following methods to understand Japan:

- Read what they wrote about themselves
- Conducted Interviews
- Watched popular Japanese movies with Japanese and got their take on what was going on and what the messages were

Benedict approached her ethnography by collecting of data from many unrelated fields in order to build an assessment.⁷⁷

This chapter will help Red Teams ask better questions in order to assess a culture and identify perspectives and options previously hidden from view.

9 Step Cultural Methodology is an analytic tool to promote better understanding of a foreign culture. See pg 134 for the details of this RT Tool.

⁷⁷ Ruth Benedict, *The Chrysanthemum and the Sword Patterns of Japanese Culture*, New York: Mariner Books, 2005. Benedict wrote, "We had to understand their [the Japanese] behavior in order to cope with it." p. 1.

Translating cultural data into analysis, theory, and action planning

1. Effecting Social change - If people understand the stories, ceremonies, and rituals they can begin to influence the culture. Next under is a method to understand stories:

a. Identify the role of the following as agents of integration or division?

- Religion
- Family/tribe
- Media
- Political groups
- Myth – commonly help beliefs

b. Select vulnerable targets such as

- Youth
- Politically disenfranchised
- Minorities etc.

c. Understand the info system

- Technology – internet, radio, TV
- Role of gossip, rumor
- Mavens – influential communicators
- Semiotics – symbols that resonate
- Language barriers

d. Communicating effectively

- Direct experience with Americans and partners
- Manipulate and or refute the cultural myths
- Decide on the narratives the staff must relate

2. Having answered the questions in the 9 step methodology it is sometimes helpful to develop a center of gravity (COG) graphic depicting the host nation power brokers across the PMESII or DIME and the linkages between them. This diagram serves as a means of thinking about the 'how to' of influencing the culture.

3. Another helpful tool is to link the answers associated with the cultural dissection methodology back to the critical variables

Some pitfalls

In *Strategy and Ethnocentrism*, Booth identifies several planning challenges shown below: Difficulty in:

- appreciating another's problems
- feeling another's pain
- understanding another's ambitions
- internalizing another's experience
- understanding how one's one actions appear to others
- feeling how threatened another may feel⁷⁸

As described in Geertz, one of the pitfalls is the failure to understand the Thick Descriptions vice surface information, the example of two boys winking.⁷⁹

- Two boys winking – in one it is an involuntary twitch – the other a conspiratorial signal.
- 2nd boy is communicating – deliberately, to someone in particular, to impart a message, according to a social code, without others knowing
- The second boy has done 2 things – contracted his eyelids and communicated. The first boy has merely contracted his eyelids
- Now there is a 3rd boy who is parodying the 2nd boy. His actions (contracting his eyelid) is the same – but his exaggerated manner sends an entirely different message
- A thin description is 'he contracted his eyelids'. A thick description is the why.

People can lie, be careful of polling data that asks people to answer potentially embarrassing information. The results are likely to be inaccurate. Additionally, in many cultures people will give the answers they think you are looking for vice what they really believe.

⁷⁸ Ken Booth, *Strategy and Ethnocentrism*, a UFMCS class hand out, pp. 38-40. Booth's book is out of print.

⁷⁹ Geertz, pp. 6-7.

Some proposed 'laws' (Sol Tax) regarding culture⁸⁰:

- Culture grows in response to human needs, and grows wildly beyond the direct need
- No people invent more than a fraction of their culture – most is borrowed or adopted
- Cultures reinterpret everything they borrow
- Culture is at equilibrium – change one thing change all the rest,
- You must embed in order to understand a culture and must let go of your own
- In order to best understand a culture one must see society from the ground up, not the top down.

Joint Operational Environment: things worth examining with a culture

- **Population growth/youth bulges**-90% of growth in developing and poor countries; youth bulges produce greater strains on education systems and labor markets increasing potential for instability; water will be the liquid of conflict in the Middle East.
- **Health**-widening gap in standards of health care between developed and developing countries; developing countries will be required to spend finite resources fighting disease, leaving less available for other public services; infectious diseases will be present in most future op environments.
- **Wealth distribution**-increasing wealth disparity between developed and developing countries will contribute to tension and hostility.
- **Urbanization**-continuing world urbanization with many of these cities in developing countries becoming the foci for crime, civil unrest and ethnic conflict; urban environments will be the venue of choice for U.S. adversaries because they negate our

⁸⁰ Sol Tax, Selective Culture Change, University of Chicago

technological advantages and tend to be high casualty environs.

- **Age distribution**-opposite ends of the scale - medical advances and declining birth rates - contributing to aging populations in developed countries while countries in Sub-Saharan Africa, Latin America and the Middle East will have 15-29 year old youth bulges.
- **Migration**-from developing to developed countries to fill growing work force shortages resulting from an aging population: assimilation of these migrating workers into the societies of the various developed nations will be key in curtailing disenfranchisement.
- **Crime**-growing presence of organized crime elements with increasing ties to terrorists organizations; criminal elements will increasingly pose a threat to regional stabilities.
- **Education**-will become more web-based and more accessible; potential for erosion of U.S. technological lead; growing access to education without opportunity will contribute to civil strife.
- **Ethnicity**-globalization can increase ethnic conflict by influencing social change.

The application of this knowledge to our unit's needs requires amplification. Can the staff identify the cultural centers of gravity for the end state or the mission at hand? Which of the COGs is the staff ignoring or are we in direct opposition to any of them?

Hierarchy of Needs

Interests refer to core motivations that drive behavior. These include physical security, basic necessities, economic well-being, political participation, and social identity.⁸¹ This section proposes an analysis of Maslow's Hierarchy of needs as a tool to help understand the underlying interests of a culture.

⁸¹ FM 3-24, Counterinsurgency, December 2006, pg 11.

The fundamental idea of Maslow is that ALL people (universally) satisfy needs at the bottom of the chain before they modify their behavior to focus on needs further up the chain. Until people secure food, clothing, and shelter, little energy will be devoted to safety and security. Maslow defines safety and security as freedom of fear from physical danger and the deprivation of food clothing and shelter. Sense of belongs applies both to personal relationships and group membership. A member of a group needs recognition from others in the group. They want to be able to shape their environment by exercise of power and control. Self actualization is when an individual maximizes their potential and becomes all they are capable. Maslow's structure is from an individual member of society's viewpoint.

Maslow Hierarchy has a very capitalist perspective where people are looking out for themselves. Individualistic societies tend to democracy and capitalism. They also tend to suffer from higher degrees of family conflict, loneliness, and alienation. Collectivism results in greater personal harmony and less stress due to lower levels of competition and insecurity. However, collectivism also tends against democracy and innovation.

The proposed eastern hierarchy (right) suggests differences for belonging and elimination of self esteem. Rationale is that physiological needs are only satisfied by being a member of the group and self esteem is a western concept – it is about group



Some competing hierarchies
(Eastern culture)



esteem vice self. People from a collectivist culture should be rewarded based on group vice individual performance. Hierarchical decision making is more accepted.



The proposed Arab hierarchy (left) replaces self esteem with self aggrandizement because the accumulation of 'wasta' is directly related to self esteem. Safety and security is not a separate level but rather is a subset of a sense of belonging as safety and security in

Arabic (specifically Bedouin descended culture) is a direct result of belonging. This pyramid is the creation of a few of the UFMCS faculty and leverages their experience in the area – it is not authoritative. It is only one estimate.

Implications. What are some of the reasons to build a culturally specific Maslow pyramid? Self actualization and self esteem are clearly culturally specific. Other culturally specific discoveries might include applicability during war, assumptions about democracy, applicability to individual actors, and reflection of religious piety.

Twenty Contrasting Cultural Factors⁸²

In a Cultural Typology of Economic Development, Grondona proposes 20 cultural factors that distinguish prospering cultures from those that are low achieving.

- Religion
- Trust in individuals
- The nature of the moral imperative
- The concept of wealth
- Views on competition

⁸² Mariano Grondona's, A Cultural Typology of Economic Development, in Culture Matters by Harrison and Huntington.

- Notions of justice
- Value of work
- Role of Heresy
- Nature of Education
- Importance of Utility
- Value assigned to lesser virtues
- Time Focus
- Rationality
- Authority
- Worldview
- Life view
- Nature of salvation
- Nature of Utopia
- Nature of Optimism
- Visions of Democracy

An Organizational Schema of Culture-General Knowledge⁸³

Culture

The creation, maintenance, and transformation across generations of semi-shared patterns of meaning, sense-making, affiliation, action and organization by groups.⁸⁴

Some key cultural concepts

Ethnocentrism: The human tendency to judge others' cultures against one's own, thereby limiting the ability to understand others and often leading to ranking of cultures as superior/inferior.⁸⁵ (The converse of ethnocentrism is relativism.)

⁸³ Selmeski, Brain, Dr. <http://www.culture.af.edu/PDF/AUQEP2009.pdf>.

⁸⁴ Chief of Staff of the Air Force. 2009. "Culture, Region and Language Flight Plan." May.

⁸⁵ Adapted from Barfield, Thomas. 1997. The Dictionary of Anthropology. New York: Blackwell Publishing. P. 155.

Holism: The notion that all aspects of culture are connected to other aspects, although the relationships vary from group to group and are not always obvious, static or result in a perfectly functioning system.⁸⁶

Relativism: The conviction that the beliefs and practices of others are best understood in light of the particular cultures in which they occur.⁸⁷ (The converse of relativism is ethnocentrism.)

Levels of culture

How culture is manifested, including:

Surface:	Materials & behaviors	Verbals & non-verbals.
Middle:	Systems & structures	Physical, social, symbolic, etc.
Deep:	Beliefs (aware → unaware)	Values, emotions, assumptions, etc.

Domains of culture

Broad categories under which cultural knowledge, belief, and behavior are commonly organized:

1. Family & Kinship: Marriage, children, family size & structure, mating, decent, inheritance, residence, relations, etc.
2. Religion & Spirituality: Origins, deities, worship, community,

⁸⁶ Adapted from Eriksen, Thomas H. 2004. What is Anthropology? Ann Arbor: Pluto Press. Pp. 37-38.

⁸⁷ Barfield. P. 98.

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3. Sex & Gender:	birth/death/life/afterlife, rules, rituals, etc.
4. Political & Social Relations:	Categories, roles, identities, responsibilities, reproduction, labor, etc.
5. Economics & Resources:	Community, ethnic, regional, national, status/leadership, law, etc.
6. Time & Space:	Production, redistribution, accumulation, exchange, etc.
7. Language & Communication:	Orientation, purposes, measurement, relations, etc.
8. Technology & Material:	Verbal & non-verbal, direct & indirect, high & low context, emotional & neutral, etc.
9. History & Myth:	Production, adoption, functions, changes, etc.
10. Sustenance & Health:	Creation, origins, ends, events, individuals, agency, etc.
11. Aesthetics & Recreation:	Food & drink production, distribution, collection, consumption, illness, healing, wellness, etc.
12. Learning & Knowledge:	Art, music, sport, clothing, adornment, rest, leisure, etc.
	Experiential, community, professional, formal, etc.

Levels + Domains of Culture Worksheet

Schema

Combining the levels and domains of culture general knowledge in a single schema, or framework, allows one to begin acquiring and organizing cultural information in a systematic fashion, no matter the group or region. To ensure your information is valid, it is essential to practice relativism. As you fill in the framework, you can then begin identifying linkages across domains and between levels. Key to this process is the principle of holism:

Notes

This schema modifies Schein's⁸⁸ levels of culture to arrive at on the levels on the 'y' axis, the Human Relations Area Files' "Outline of Cultural Materials"⁸⁹ to develop the domains on the 'x' axis and Hall's "map of culture"⁹⁰ to synthesize the two. While it provides a more rapid and systematic approach to cultural learning, it does not offer an easily applicable guide to cross-cultural interaction. The schema is therefore only part of a much larger set of knowledge, skills and attitudes required to achieve cross-cultural competence (3C): "the ability to quickly and accurately comprehend, then appropriately and effectively act, to achieve the desired effect in a culturally complex environment."¹⁵

⁸⁸ Schein Edgar H. 2004. Organizational Culture and Leadership. San Francisco: Jossey-Bass.

⁸⁹ Murdock, George P, et al. 2006. Outline of Cultural Materials. New Haven: Human Relations Area Files, Inc.

⁹⁰ Hall Edward T. 1959. The Silent Language. Garden City: Doubleday.

Levels of Culture			Domains of Culture
Deep (beliefs & emotions)	Middle (systems & structures)	Surface (material & behaviors)	
			Family & Kinship
			Religion & Spirituality
			Sex & Gender
			Politics & Social Relations
			Economics & Resources
			Time & Space
			Language & Communications
			History & Myth
			Sustenance & Health
			Aesthetics & Recreation
			Learning & Knowledge

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SECTION VIII: Critical Analysis and Reviews

Purpose: This section focuses on

- critical analysis
- adaptable framework to design and conduct a critical review.

General

Red Teams provide an independent capability to conduct unbiased critical analysis and reviews to support the organizations' mission or objectives; provides alternative perspectives and solutions to problems; and challenge solutions based on identified weaknesses, gaps, or falsehoods.

Definitions

There is no widely accepted or approved DOD definition for critical review or critical analysis.

Critical Analysis and Critical Review have a similar meaning, namely:

"It is a formal independent investigation of a topic or area often using subject matter experts to identify strengths, weaknesses, vulnerabilities, issues, insights, alternative perspectives, and recommendations."

General Considerations

- The process, composition, and format for each critical review will differ based a variety of factors to include the area or topic, the scope of the investigation, resources and time allocated, access to subject matter experts, products expectations, and guidance from the senior leader who directed the study.
- Critical reviews differ from problem solving, where as critical reviews normally examine an existing program, proposed solution, or a selected course(s) of action - resulting from a completed problem solving process.
- While not problem solving, critical reviews will use many of the same skills used in basic problem solving such as validating assumptions.

Section VIII - Critical Analysis and Review

- Good critical reviews must be adversarial in flavor, challenging the topic and solution, but the Red Team must avoid the perception of being adversaries while conducting the study.
 - Where possible, use empirical data to support conclusion.
 - When using subjective techniques in the critical review, such as interviewing, take caution to avoid bias or reaching the wrong conclusions from antidotal information.

Critical Review Process

A critical review is an intellectual exercise using various investigative and analytical techniques. The process described here is only a start point for red team leaders to formulate their own plan and serves only as baseline to spur thought on how the Red Team will approach a specific critical review.

While the process described here appears as a linear process, in reality many of the steps may overlap. Except for the first and last step, conduct the other steps simultaneously or amended based on time, resources, and the initiating authority's guidance.

Finally, a critical review by definition assumes the existence of a concept plan or other document requiring review. If the initiating authority is dissatisfied with the existing courses and desires the Red Team to examine a problem to determine alternative solutions, the Red Team should use the Problem Solving Method as opposed to the Critical Review.

Critical Review Steps

- Identification of the Requirement – Receipt of Mission
- Critical Review Mission Analysis
- Restatement of the Requirement or Red Team Task to the Initiating Authority
- Key Issue/Problem Identification and Assessment
- Initial Research – Formulate Data Collection Plan
- Conduct Research
- Determine Critical Review Criteria
- Contrast and Comparison - Key Questions + Alternative Perspectives
- Finalize the preliminary assessment and initial report
- Crosswalk the initial report with requirement
- Complete report and briefings

Identification and Receipt of the Requirement/Mission

Red Teams will be tasked by a higher authority to conduct devil advocate tasks. Identification of the intent of the initiating authority of the critical review – can in part be determined by answering the following:

 ? Is the work of the Red Team intended to analyze a problem and present alternative courses of action?
(Alternative view)

 OR

 ? Is the work of the Red Team intended to analyze a chosen course of action for weaknesses, vulnerabilities, strengths, etc.? (Adversarial view)

 OR

 ? A combination of both

 ? What has the initiating authority stated in terms of delivery date, funding, deliverables, senior mentor or outside organizational input and coordination (e.g. who should you talk to or not)?

 ? What constraints or restraints have been provided concerning the Red Team's effort?

Critical Review Mission Analysis

The Red Team reviews the guidance provided by the initiating authority and begins to gather initial information such as applicable regulations, doctrine, guidance documents, approved concepts and other items to support the critical review.

Using the established deliverable date for the critical review and a quick review of the initial problem (concept), the team conducts backward planning to identify initial research periods, on/off site interviews; time for analysis, crosswalk, crosstalk, preparation of reports, briefings, and other critical events. As a result of this backward planning, the team determines if the initiating authority allowed sufficient time to task.

Determine resources to include: funding for additional personnel, subject matter experts, travel, etc.

Identify security issues, access, clearance requirements, storage, automation, office space, etc.

Formulate a restated mission statement for the Critical Review for approval by the initiating authority. The mission statement should address purpose, method and end state. For example:

“The Red Team will conduct a critical review of CONOPS X in order to provide the Commanding General a quantitative analysis of the CONOP with recommended alternative courses of action NLT 1 October 200x.”

Restatement of the Red Team Requirement and Task

Based on the Red Teams' mission analysis, provide the following briefing to the initiating authority for approval. The purpose of this briefing is to answer the question, “what purpose and how the Red Team will conduct this critical review?”

- Restated Red Team Mission

Section VIII - Critical Analysis and Review

- Timeline for the Critical Review with key events highlighted
 - Costs and resources Issues to support the review
 - Product description, written and briefing deliverables
 - Team composition
 - Other items such as senior mentors or key interviews
 - Identify documentation from the initiating authority to solicit cooperation, input, and coordination from higher and subordinate headquarters.

Key Issue/Problem Identification and Assessment

- Review the key documents directly applicable to problem to answer the following questions.
 - What is the stated problem, need, or gap?
 - Has there been a solution or course of action selected? Who selected?
 - What is the desired end state?
 - What is the stated requirement contained in higher headquarters guidance? What is driving the solution?
 - Who levied the requirement? Is it at the right level with the authority?
 - What are the stated assumptions?
 - What are the implied assumptions?
 - Do these assumptions pass the doctrinal test of “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?
 - Do these assumptions pass the common sense test?
 - What are stated constraints? Do they impact on the solution or course of action?
 - What resources does the projected COA or end state require? What resources were provided or do gaps exists? How are they being addressed?

Section VIII - Critical Analysis and Review

- Are there organizational structures or command and control issues?
- What organizational culture paradigms are present which impact on the solution or selection of a course of action?

Initial Research

- What are the key references specifically annotated in the document under review?
- What are implied references?

Formulate Data Collection Plan

- Construct a collection plan based on the identified gaps. As a minimum the collection plan should:
 - Assign a number to the item
 - Identify the “what” (e.g. Joint Publication 3.0 – Identify the doctrinal definition of) Include classification
 - Identify responsibility for collection and date to be completed
 - Identify responsibility for review/analysis and date to be completed.
 - Identify the location of the document or data (e.g. file number name/drive and file name)

Methods to Collect Data⁹¹

Obtain data from a variety of sources. Considerations on selecting the types of data include:

- Cost
- Time
- Accuracy
- Credibility of source.
- Major methods of data collect:
 - Document Review
 - Questionnaires, Surveys, Checklists
 - Observation
 - Focus Groups

⁹¹ Extracted from Basic Guide to Program Evaluation found at www.mapnp.org/library/evaluatn/fnl_eval.htm accessed on 02 Feb 05.

Section VIII - Critical Analysis and Review

- Interviews

Conduct Research and Review

The size of the team and scope of the topic will often determine the need for “azimuth checks” or interim progress reviews to ensure the team meets the collection, analysis requirements, and deadlines.

As each member of the team review the materials and data, identification of the following normally become apparent:

- Identification of assumptions, constraints, and limitations
 - Resources expended, required, or gaps,
 - Key facts
 - Courses of action considered and rejected.

As Red Team collect these items, establish a system should to facilitate their collection and evaluation.

Key criteria may become apparent during the process. Collect these to determine if they should remain as criteria.

Subject matter experts (SME) or senior mentors may provide insights unobtainable from other sources. Plan SME involvement carefully and with specific intent.

Determine Critical Review Criteria

Establish criteria to examine the selected course of action or proposed courses of actions. These criteria can be either subjective or objective. They can include such traditional items as cost/benefit comparisons, comparison of technical capabilities, or efficiency in terms of time to render a service. Other mechanisms include principles of war (e.g. unity of command), or DOTMLPF. The solution should address whether it is executable and feasible. The best criteria are observable and measurable.

Contrast and Comparison

Contrasting and comparing solutions is the most important step in the process. It involves brainstorming established criteria with the proposed solution, courses of action, and

Section VIII - Critical Analysis and Review

identification of alternative courses of action. The Red Team leader should ensure agreement on the following items:

 ? Does the requirement address the need, problem, or fill the gap?

 ? Does the requirement meet the full scope of the problem?

Address the following questions ff analyzing a problem to determine alternative solutions:

 ? What courses of actions were considered?

 ? What other courses of action should have been considered?

 ? Does the selected course of action meet the requirement? Do the others?

 ? What assumptions were made? Are they correct?

Continually ask the “why” and the “so what” questions.

Finalize the Findings and Initial Report

As diverse as the structure of a critical review – so is the report. Some considerations for formats are listed below:

- Title: Organization name, topic, classification, date
- Table of Contents
- Executive Summary
- Purpose of the Critical Review:
- Background about Organization, Issue, Program, Solution, Course of Action
 - Regulatory Guidance
 - Assumptions
 - Constraints
 - Restraints
- Methodology Used in Critical Review
 - Red Team Members with background data
 - Identify SME consulted
 - Identify Senior Mentor/Reviewer
 - Types of data collected and identification of key documents
 - Interview and other surveys

Section VIII - Critical Analysis and Review

- Empirical Data
- Limitations or Cautions (e.g. estimated costs)
- Identify Courses of Action
- Criteria used by Red Team to examine Courses of Action
- Conclusions
- Recommendations
- Appendices: copies of documentation, simple listing of references, summary of interviews, data, case studies, or other items of interest.

Crosswalk the Report against the Requirement

Answering the question, “Does this report address the requirements of the initiating authority?. Include a determination and summary of findings or recommendations that go beyond the initial guidance.

CHARACTERISTICS OF GOOD CRITICAL REVIEWS

<i>Utility</i>	<i>Accurate</i>
<i>Relevance</i>	<i>Reliability</i>
<i>Practicality</i>	<i>Validity</i>
<i>Satisfy Mission Requirements</i>	

Deliver Report and Conduct Briefing of the Findings

Only deliver the report to the initiating authority unless directed otherwise.

Section VIII - Critical Analysis and Review

Notes: _____

SECTION IX: Reachback

UFMCS sponsors a community of practice (CoP) for DoD red teamers on NIPRnet, aka "**RT Central**" for reachback. Joining *Red Teaming (RT) Central* is easy, if you have an AKO or DKO account. Members can access the site from any computer that has an internet connection (from anywhere, at any time). Scott watches the site 24/7/365 (scott.fausset@us.army.mil, 913-684-4323, DSN 552).

Participation is self-directed. The CoP operates a second site for classified business, RT Central-S (SIPR) augments as needed. A third site is also under construction for non-DoD participation (i.e., academics). This system will become our CoP's conduit with each other and the outside world.

Entering RT Central, the **Welcome** tab provides links to the latest activity on the site (a quick overview of the entire CoP). The **Documents and Video** tab has items of immediate use, i.e., programs, classes, how to enroll, etc. The **Charter** explains site and content management. *Intro to Reachback* has step-by-step instructions for getting started on the site: address, register with AKO, subscribing to RT Central, adding a file, or asking a question.

The screenshot shows the homepage of the Red Team Central website at <https://redteaming.bcks.army.mil>. The page features a navigation bar with links for My Profile, Admin Options, Start a Thread, Log In, and Log Out. The main content area includes a "Red Team (RT) Central" section with a welcome message, a "Recent Activity" feed, and sections for "Surf the BCKS Library" and "Active Members". On the right side, there are "Featured Member" and "Active Members" profiles.

Teams can request a folder in the **Red Teaming Community**. The **RT Library** folder has readings, papers, models, TTP, links to external resources, research tips, and much more. Teams and instructors vet content for posting in

the library. The CoP also posts information on past and future conferences. Our bumper-sticker says it all, “*Connecting Red Teamers to resources and each other.*”

To get started on RT Central...

1. Login to **AKO** or **DKO** and then go to <http://redteaming.bcks.army.mil>.
2. Click **Become a member**, near the top of the screen.
3. Provide the requested data and click **Submit/OK**.
4. Click **Subscribe**, near the top of the screen.
5. Provide the requested data and click **Submit/OK**.
6. Peruse the **BCKS Explorer** box (left side of page).

To get started on RT Central-S...

1. Login to **AKO-S**.
2. Go to RT-S
<http://www.us.army.smil.mil/suite/portal/inex.jsp>
3. Use the directory on the left to navigate.

Notes: _____

SECTION X: Research

Below is an excerpt from ***RT Central / RT Library / External Resources / Documents*** to assist with research. The community of practice (CoP) continually adds sites, methods, tips, how to's, etc. The Sunday NY Times' book section posts books to order for mail delivery; books with different ideas on terrorism, along with a brief synopsis of the book. The Economist and Atlantic have frequent articles by journalists who have spent time in the field and frequently have different views. Russ Haynal at <http://navigators.com/> runs a course called "Hidden Universes of Information on the Internet", formerly known as FBIS. The Center for Critical Thinking and Moral Critique <http://www.criticalthinking.org/> conducts advanced research on critical thinking, and sponsors an annual International Conference.

1. HTS Analyst reports:
<https://forums.bcks.army.mil/secure/CommunityBrowser.aspx?id=699195&lan...>
2. State Dept country profiles:
<http://www.state.gov/r/pa/ei/bgn/>
3. Combating Terrorism Ctr: <http://www.ctc.usma.edu/>
4. Open Source Center: <http://www.opensource.gov>
5. Somalia news: <http://www.shabelle.net/news/english.htm>
6. Iran Portal: <http://www.iranchronical.com/>
7. Syria Today Magazine: <http://www.syria-today.com/pkg05/>
8. Central Asian news: <http://enews.ferghana.ru/main.php>
9. Ask a Librarian: <http://www-cgsc.army.mil/carl/>
10. The Economist: <http://www.economist.com>
11. Gertz File: <http://www.gertzfile.com/gertzfile/>
12. Night Watch: <http://nightwatch.afcea.org/>
13. Rapid News Updates: <http://www.rapidnewsupdates.com>
14. Google Translate: http://google.com/translate_t
15. Competing Hypothesis Model:
<http://www2.parc.com/istl/projects/ach/ach.html>

Section X - Research

SECTION XI: Structured Analytic Techniques

9293

The CIA's Sherman Kent School developed Structured Analytic Techniques for use by intelligence organizations. These techniques have value for Red Teams as well. This section introduces three Red Team Techniques and Procedures. The remaining techniques come from the CIA reference.

Purpose: This section provides a set of techniques to overcome analytic "mind-sets". These structured analytic techniques—often referred to as "alternative analysis".

Techniques addressed elsewhere in this handbook are

• Red Team - Key Questions	10
• The 13 Critical Variables	22
• Critical MDMP Questions	62
• Red Team actions during MDMP	66-74
• Red Team assessment questions	83
• Red Team assumption questions	87
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The techniques in this section are:

Red Team Techniques and Procedures

• 9 Step Cultural Methodology	134
• Premortem Analysis	138
• ADSO String of Pearls	140

Structured Analytic Techniques

• Stakeholder Analysis	147
• Diagnostic Techniques	151
o Key Assumption Check	151
o Quality of Information Check	153

⁹² Tradecraft Review, A Tradecraft Primer: Structured Analytic Techniques for Improving Intelligence Analysis, CIA, Sherman Kent School, Kent Center for Analytic Tradecraft, Vol2, Number 2, June 2005.

⁹³ See also FM 5.0, Chapter 2, Army Problem Solving.

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9 Step Cultural Methodology is an analytic tool to promote better understanding of a foreign culture. By understanding others better, we may be better able to engage a foreign culture.

When to Use

This is one of our basic tools and should be used at the start of the decision making process in order to best ensure that alternative perspectives and information is available during both the design and mission analysis steps of the process.

Value Added

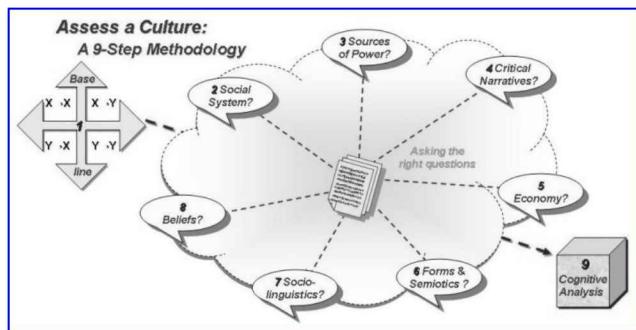
Thorough use of the cultural analytical methodology will ensure an enhanced and more nuanced decision as the methodology presents information to the commander through the lens of the four ways of seeing. Wise use of the four ways of seeing step in the method will present a commander with an initial first look at his mission and associated tasks through the eyes of the range of potential adversaries in a region as well as the people of the region.

The Method

Section XI – Structured Analytic Techniques

Steps 1 & 9 are analytical. Steps 2-8 are collection focused.

Step 9 must occur last and step 1 must occur first, but thereafter each situation may present information or opportunities in such a way as to alter your sequence.



Step 1 Establish a base line of understanding by examining the four ways of seeing.

- **How X views itself.** This must be the first step of any cross cultural analysis. *What are our fundamental beliefs about our motives, our values, and ourselves?*
- **How Y views itself.** The next critical step is to identify what our “object believes about itself”. People must be careful not to allow personal judgment to color this analysis. If for instance, they believe they are God’s chosen group - whether we believe “they are”, or not, is not germane at this time.
- **How X views Y.** The next step is to address ‘how we view them’ as well as identify disconnects between ‘how we view them’ and ‘how they view themselves’ – these are the critical friction points that cultural analysis and planning must address. Our treatment of the object group must be consistent and ‘fair’ based on how they view themselves vice how we view them.
- **How Y views X.** In turn, we need to understand how they view us vice how we view our actions and ourselves. We must direct our info campaign at closing the gap between their perception of us and how we want to be viewed.

Step 9 Conduct a cognitive analysis. In what ways does the collected data (steps 2-8) shape how ‘they’ think? Several factors underpin the development of culture. They include:

- Geography – desert dwellers think differently about the world than forest dwellers.
- History – historically invaded or isolated, ruled by heredity or ruled by law.
- Religion – belief system of our opponent, key sites, organization of society, interpersonal relationships between our forces and the population.
- Significant emotional events in the life of the country – coups, assassinations, contact with other cultures.
- Economics – agrarian, nomadic, industrial.

Step 2 What defines the Social System?

- a. Roles of family and tribe.
- b. Roles in ascribing status: *region, education, religion*, etc.
- c. Is status acquired through birth or achieved through action (social mobility)?
 - What are the common child rearing practices, and how do they differ by gender and class?
 - From which side of the family does descent originate?
 - What is the nature of marriage in society: who decides, what are the power relationships internal/external to the married unit, monogamy, or polygamy?
 - Is there a nuclear family or extended family units?
 - What is the social contract in each state? What do the citizens expect the state to provide and in return for what? Is this contract intact?
 - Is the society pluralistic, synergetic, or assimilatory?

Step 3 What are the sources of power? For example: charisma, violence, legal basis, etc.

- Do the powerful live ‘for’ or ‘off’ politics?
- What is the role of patronage, what characterizes a patron?
 - Are politics used for religious purposes or religion used for political purposes?

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- What are the key institutions in the social structure, how did the leaders of those institutions acquire their role?
- How do state bureaucracies relate to other elements of the social structure – tribe, religion ethnicity?

Step 4 What are the critical narratives of the cultural history?

- What do people believe about themselves and where they came from?
 - What are the stories taught in school?
 - What are the key myths associated with social control?
 - What are the societies' origin myths?
 - What role did colonialism play?
 - How does strength of nationhood and citizenship relate to a core concept?

Step 5 - What is the role of the formal and informal economy?

- Is what would be termed bribery and corruption in the West endemic? If so, what do locals consider corrupt?
- Do the elites own wealth, or own power that in turn accumulates wealth?
- How is the economy fundamentally different or similar to our own?
 - Who pays what for individual health care?
 - What is the nature of home ownership? Elderly care? Investments?
- What kind of goods and services are found in the informal economy? How big is the informal economy vice the formal economy? If it is large – why?

Step 6 - What Cultural forms and Semiotics are endemic to the society?

- What do they celebrate, what are the symbols associated with those celebrations, how does this reflect a different perspective than the West (rituals, ceremonies, etc)? Any rites of passage, degradation, enhancement, renewal, conflict reduction, or integration?

- ❑ How do they sanction societal members? What is the role of criticism/alienation?
- ❑ Who are the heroes –what stories are told about them, what traits emphasized?
- ❑ What is the role of emotional outburst – restrained, accepted, gender specific?

Step 7 – What sociolinguistics are evident?

- a. What is the nature of routine greetings and farewells?
- b. What are the concepts that translate only with difficulty – identify and attempt to understand them
- c. What US concepts present difficulty to linguists attempting to translate into the native language – indicates that the underlying logic of the concept may be foreign as well
- d. What is the role of exaggeration and overstatement?

Step 8 What are their core emotional beliefs?

- ❑ For what reasons would people in the society kill someone?
 - On behalf of the state?
 - To restore personal or family honor?
 - As appropriate vengeance? (Rule of law – rape, murder, incest, etc)
- ❑ To what degree do they value human life?

Pre-mortem Analysis

Dr. Gary Klein developed the concept of the pre-mortem analysis⁹⁴. This is a powerful red teaming tool as it is 1] simple to use, 2] simple to understand, 3] and when used during the decision-making process will empower the red team and members of the larger plans team to question the premise of a proposed course of action, assumptions, or specified tasks.

⁹⁴ Gary Klein, *Sources of Power: How People Make Decisions*, Cambridge, Mass. The MIT Press, 1998, p3.

When to Use

The ideal time to use a pre-mortem analysis is just before the war gaming step in the decision making process, either the war game that analyzes proposed COAs or the war game that refines the selected COA into the concept of the operation.

Value Added

The use of a pre-mortem analysis will break the ownership of a particular course of action by a thorough, if rapid, session of answering the question, what would cause this course of action to fail if it is the basis for the operations plan?

The Method

Pre-mortem analysis is an application of mental simulation. The premise for pre-mortem analysis is that people may feel too confident once they have arrived at a plan, especially if they are not highly experienced. The pre-mortem analysis requires one person to act as the scribe and must be limited in duration to no more than 30 minutes, ideally 20.

In a pre-mortem analysis:

Step 1: Preparation. Red Team members should already be familiar with the plan.

Step 2: Imagine a fiasco. Imagine that the plan has failed, and is a total, embarrassing failure. Ask; what could have caused this?

Step 3: Generate the reasons for failure. Red Team members individually spend several minutes writing down all of the possible reasons why the plan could have failed catastrophically. It is important to do this individually first, so that the intuition and experience of each Red Team member is brought to bear. Otherwise, the group may overlook some of the good ideas.

Step 4: Consolidate the lists. Once all Red Team members developed reasons for failure, go around the room and discuss them, one at a time, and record all ideas. By the

end of this step, the group should have a comprehensive list of concerns with the plan.

Step 5: Revisit the plan. Based on the comprehensive list of concerns, revisit the plan to determine what to mitigate.

Develop concepts for potential branch plans, for instance.

Step 6: Periodically review the list. Do this for the duration of the planning process and during execution. This helps keep the possibility of different types of failure fresh in everyone's mind.

That is all. The object of the exercise is to explain why the plan would fail. There must be a recorder for the session.⁹⁵

ADSO “String of Pearls” Analysis Tool

The Army Directed Studies Office developed the string of pearls concept as a technique of linking a rigorous analysis of assumptions. If assumptions fail to become fact, they affect the specified tasks articulated within the plan. This is a time consuming analysis best suited for the product of a structured planning process. If time constrained, the red team can use it to focus on the basis of assumptions. Use of the tool helps provide a sensitivity analysis on a friendly plan or order. A sensitivity analysis may show how vulnerable the plan is to faulty assumptions during planning; dependencies that are not in place before plan execution; or unmitigated, potential 2nd and 3rd order effects.

The concept analysis may help identify a critical vulnerability or vulnerabilities in the plan. This allows the planners to reinforce or mitigate these critical vulnerabilities. At a minimum, it informs the commander that there is a risk associated with a particular area in the plan.

There are an infinite number of 2nd and 3rd order effects for any action. This technique will help identify those that are

⁹⁵ Klein, p. 71.

Section XI – Structured Analytic Techniques

most likely to occur and most likely to generate effects which may need to be mitigated by planning branches to the plan.

This analysis of the plan can stand alone or be used in a comparison with an emulative analysis of an enemy plan in order to see where differing strategies match up. The staff may identify an enemy strategy that is “unanswered” by a friendly course of action.

When to Use

String of Pearls is a time consuming process. It is best used when the Red team is asked to do an independent assessment of an existing plan. Red Teams can also use the method in a focused manner for analyzing and challenging assumptions associated with a plan, as well as showing the effect of a failed assumption on the entire plan.

Value Added

The methodology is a rigorous process of analyzing assumptions. The methodology will:

- help prevent “assuming away the problem”
- identify weaknesses in a plan
- highlight the need for focused branch plans.

The Method

There are four basic steps to conducting a concept analysis.

Step one is to identify all the major tasks in the plan.

Step two is to take each task that you’ve identified and identify three elements of each task:

- Identify challengeable stated and implied assumptions for each task
- Identify key dependencies for each task
- Identify possible 2nd and 3rd orders of effects for each task

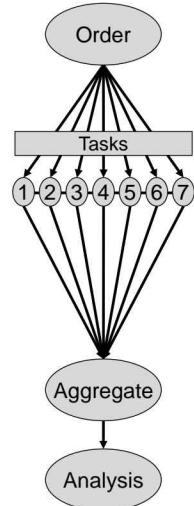
Step three is to depict how the combined assumptions, key dependencies, and possible 2nd and 3rd orders of effects for each task accumulate across the entire plan.

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Step four is to analyze how the cumulative effect you have depicted above might indicate any gaps or weaknesses in the plan.

Steps to Concept Analysis

1. Identify major tasks (specified and implied), build a “string of pearls”
2. For each task, build a “spider-web” chart to:
 - Identify challengeable stated and implied assumptions
 - Identify key dependencies
 - Identify possible 2nd and 3rd order effects
3. Analyze cumulative effect of the above
4. Identify possible gaps or weaknesses



We call this the “String of Pearls”. This graphical presentation is key to the final product. It is important to group the tasks by objective, phases, layers, or any other way the planners have related them. At the end, besides showing that a particular task needs to be looked at in greater detail, this type of grouping will show the cumulative effect on each objective, phase, or layer.

Appropriate assumptions used in decision making have two characteristics:

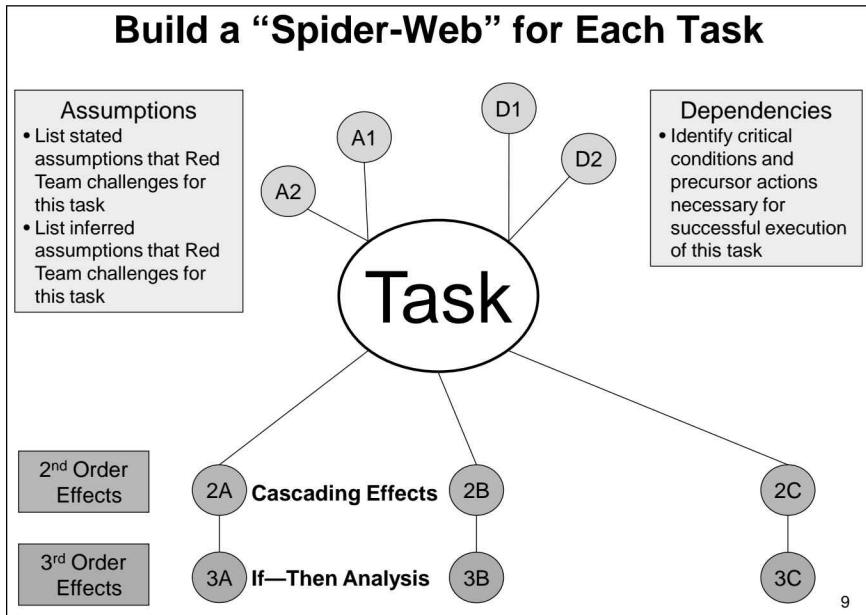
- They are valid, that is, they are likely to be true
- They are necessary, that is, they are essential to continuing the problem solving process

What the staff is most concerned about is the validity of the assumptions. If the planners are considering assumptions that are valid but not necessary, they are creating extra work

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for themselves. If they are creating a roadblock in the planning process for themselves by identifying an assumption that is not necessary but can't be shown to be valid, that is a concern and should be pointed out.

- Examine the specified assumptions in the plan
- Examine whether they are valid assumptions
- Associate each assumption you do not consider valid with a specific task or tasks that you have previously identified
- For each task, determine whether an assumption should be implied as necessary in order for that task to be executed
- Examine whether these are valid assumptions
- List these assumptions in the “spider chart” and spreadsheet
- Characterize each assumption as either a “failure” assumption or “risk” assumption
- If the assumption is invalid, accomplishment of the task associated with it may fail or may be at risk of failure
- A dependency is a critical condition or precursor actions necessary for successful execution of this task
- Another task can be a dependency



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The relationship of one task to another where the start or end date of the second task (successor) is constrained by the start or end date of the first (predecessor). Let's talk about the difference between an assumption and a dependency. By re-wording a dependency, you can turn it into an assumption but that defeats the purpose of this analysis. For example, you could say either that execution of this task is dependent on fuel being available or that a planning assumption is that fuel is available.

The difference is temporal.

An assumption is necessary to continue planning a specific course of action. If the staff assumes fuel is available, then the staff can plan a road movement or helicopter assault.

A dependency is necessary to execute the task successfully. Even if the staff planned a helicopter assault but the fuel is not available, then we cannot execute the task.

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- A 1st order effect is directly attributable to a task
- Cascading order effects follow a chain of causality (If—then)

Let's talk about another example, with a cultural twist. This one is from Somalia:

- Task: Disarm populace
 - 1st Order Effect: Personal weapons are confiscated from populace
 - 2nd Order Effects: Populace is not able to protect itself against armed intruders; men feel emasculated because men carry weapons
 - 3rd Order Effects: Crime rate goes up; men are angry at coalition for taking away their ability to protect their families

Build a Spreadsheet

- Spreadsheet lists assumptions, dependencies, and 2nd and 3rd orders of effect for each task
- Fill in the spreadsheet with the same information which is on the spider charts after you have completed all of them. This will help you identify the frequency with which they occur throughout the plan or order.
- Use exactly the same language for similar ideas
 - Example: “The enemy changes tactics” is similar to “The enemy adjusts his tactics” but will be counted as two separate ideas by excel
- This spreadsheet will help count the frequency of events

	A	B	C	D	E
	Task	Assumption	Dependencies	2nd Order of Effects	3rd Order of effects
1					
2	Displace Command Post	Trucks available (ground movement)	Jump CP is operational	Fuel will be consumed	Fuel depot will need to be replenished
3		Helicopters available (air movement)			

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- From the spreadsheet or a manual count
 - Count how many times each assumption occurs throughout the entire plan or order

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- Count how many times each dependency occurs throughout the entire plan or order
- Count how many times each 2nd or 3rd order effect occurs throughout the entire plan or order
- A thorough analysis of the data will reveal that some events occur repeatedly across multiple tasks—this might be of concern to the commander
- Example:
 - If the same dependency is necessary for 15 of 20 tasks, it is significant for this analysis
 - If the same 2nd order effect only occurs in only 10 of 20 tasks, it may not be significant for this analysis

Graphic Representation. The aggregate effect of the identification of possibly invalid assumptions, dependencies, and 2nd and 3rd order effects for each task can be viewed in a graphic representation. This representation indicates which tasks are most sensitive to other events and helps planners determine and prioritize which tasks should be revisited or what branch plans should be written to mitigate common 2nd or 3rd order effects

Step 1: Draw “failure” and “risk” assumptions over the tasks on the “string of pearls”

Step 2: Draw dependencies over the tasks on the “string of pearls”

Step 3: Draw 2nd order effects under the tasks on the “string of pearls”

Step 4: Draw 3rd order effects under the tasks on the 2nd order effects

Step 5: Combine all elements in one slide, except for “at risk” assumptions

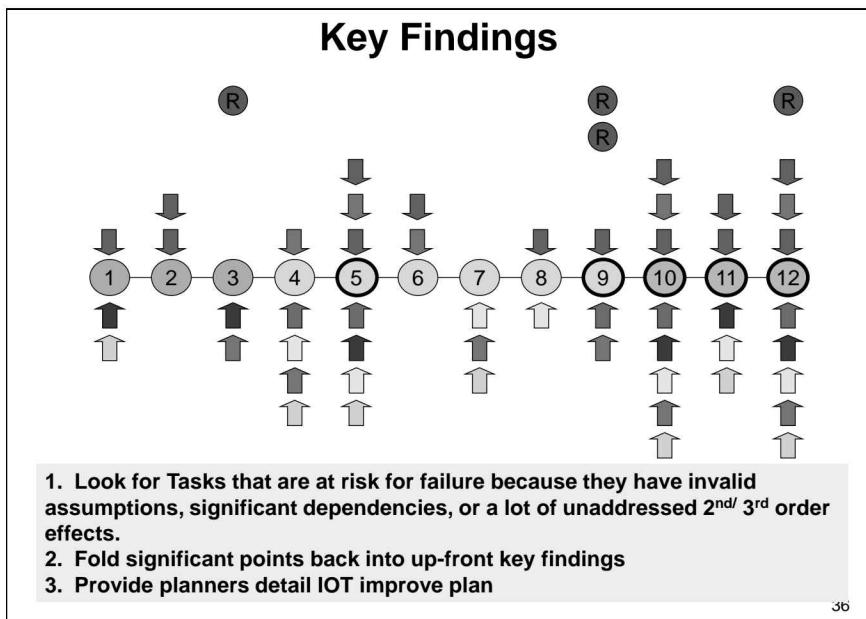
Analysis/Key Findings

- Note which tasks are most sensitive to the aggregate effect of the different elements you have identified
- Present this as a key finding, recommending that planners revisit these tasks or write branch plans to

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mitigate the consequences of the attempted or successful execution of the tasks

In the chart below tasks 5 and 9-12 were identified as especially sensitive tasks given the number of dependencies and 2nd and 3rd order effects. Each staff group should then provide its analysis and guidance back to the plans staff section (G5/S5) for its final efforts in writing the operations plan. The steps of this process, much like the steps of the decision making process, can be adapted to the time available.



Structured Analytic Techniques

Stakeholder Mapping

When to Use

Stakeholder Mappings should be used when the Red Team needs to demonstrate the breadth of effects a planned operation can have within an operating area. Using the G2's

own data, supplemented by Red Team analysis, classified and open source, the Red Team can develop a perspective on operations that will enhance the appreciation of the staff on potential unintended consequences of operations. The Red Team can also suggest methods of improving the impact of an operation on groups that are “on the fence” regarding their support for US/coalition/host nation operations.

Value Added

Stakeholder Mapping’s greatest value is in the campaign design phase of decision making, specifically in framing the problem. In developing the commander’s appreciation for the mission and operating area that precedes mission analysis, Stakeholder Mapping and the Cultural Methodology provides “understanding and viewing the operational environment from a systemic perspective and identifying and analyzing centers of gravity.”⁹⁶ The analysis that occurs in the Cultural Methodology will give the commander and planners insights into how the stakeholders view division, corps, or Army Service Component Command efforts and operations in the battlespace. This analysis will help identify decisive points, friction points, Lines of Operations/Effort, and assist staffs in determining the limits of the effects regarding the human terrain. This analysis will also help in managing expectations on the limits to each LOO/LOE or force a re-design to develop new avenues of approach to achieve the command’s desired effects.

The Method

Stakeholder Mapping enhances an existing red team tool, the Nine-Step Cultural Methodology. The refined Nine-Step Cultural Methodology is used by red teams for collecting and organizing data to enable a staff’s deeper understanding and

⁹⁶ Department of the Army, Field Manual 3-0, Operations, February 2008, paragraph 6-30, page 6-7.

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effective engagement with foreign cultures. This analysis informs the planning process by identifying the views, ideas, biases, and motivations of those people and groups that can affect military operations. Lines of operations or courses of action can be developed against, with, or in support of these entities, based on this analysis.

Stakeholder Mapping within Red Teams applies the concept of Hard Opposition, Soft Opposition, Soft Support and Hard Support, HO-SO-SS-HS. The two extremes, Hard Opposition and Hard Support, by and large cannot be swayed from their current positions. These two categories of people and groups are the primary concerns of the intelligence (G2/S2) staff and the Civil-Military Operations (G9/S9) staffs respectively. The Red Team focuses on the groups in the middle; the so-called “fence sitters” that may influence operations, actions, and activities or be affected by these operations but are often overlooked during mission analysis. It is here that Red Teams believe that lasting effects can be achieved by, with, or through the influence of these groups.

The first step of Stakeholder Mapping is to identify all individuals, groups, and organizations operating in/near the battle space that can affect the mission. It is important to consider formal and informal groupings. Terror groups, tribal groups, political groups, Non-Governmental Organizations, criminal groups, and bordering nations are examples of who should be considered. Open source information as well as classified information can be used to develop the database for use in identifying the range of people and groups.

The second step is to associate each group into one of three subjective categories: Black, White, and Gray. Black are those assessed as Hard Opposition – the enemy. White are those assessed as Hard Support – the allies. Gray are assessed as Soft Opposition and Soft Support – the “fence sitters.” Gray groups and individuals are then closely evaluated for strengths, weaknesses, and manners of

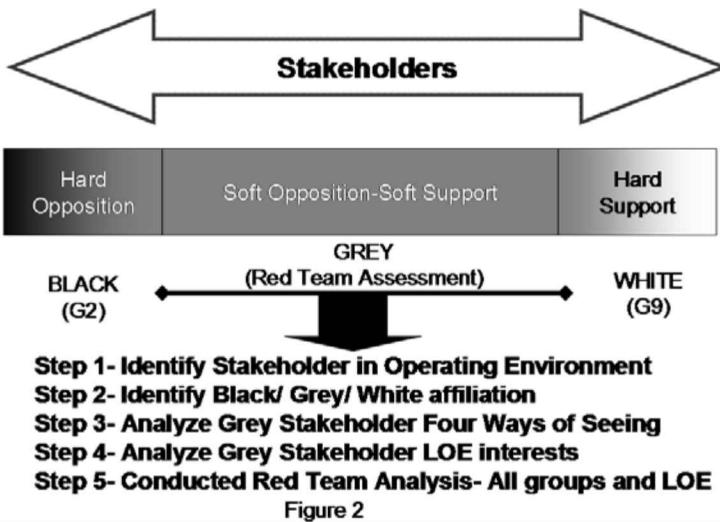
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approach to either firm up their support for coalition and government operations or to suggest methods that will change opinions from soft opposition to support. This range of approaches can be explored through the use of the nine-step cultural analytical methodology. Once these steps are completed the rest of the nine-step cultural methodology can be completed. The primary staff will evaluate the Black and White categories and the Red Team should focus on the Gray category and search to identify a “Tipping Point” in relations with the Gray category.

Tipping point is the possibility of sudden change. Malcolm Gladwell described the “Tipping Point” as, “...the moment of critical mass, the threshold, the boiling point.”⁹⁷ Gray stakeholders will lean in a direction of mission support or failure and while the directional momentum of a Gray stakeholder is difficult to measure the potential payoff is tremendous. For example, informational flow within Iraq is limited as compared to the West. Only 40% of the adult population is considered literate, thereby most will rely on Mosque sermons, rumor, hearsay, local Sheiks dictating, or reactions to what the populace sees, i.e., Flag changes, improvised explosive devices, Coalition soldier disrespect etc, as evidence of coalition intentions. These unwritten but rapidly transmitted messages can potentially spark unfavorable reactions in the populace toward reactionary and abruptly halt any positive momentum. Given this level of understanding, the associated information operations that shape the human terrain preceding and following physical domain operations can be more precisely tailored to meet the objectives of a command.

⁹⁷ Malcolm Gladwell, *The Tipping Point*, New York: Little, Brown and Company, 2000, p. 12

Analytical Framework



Diagnostic Techniques

Key Assumptions Check: List and review the key working assumptions on which fundamental judgments rest.

When to Use - most useful at the beginning of an analytic project. An individual analyst or a team can spend an hour or two articulating and reviewing the key assumptions. Rechecking assumptions also can be valuable at any time prior to finalizing judgments, to ensure that the assessment does not rest on flawed premises. Identifying hidden assumptions can be one of the most difficult challenges an analyst faces, as they are ideas held—often unconsciously—to be true and, therefore, are seldom examined and almost never challenged.

Value Added

Explicitly identifying working assumptions during an analytic project helps:

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- Explain the logic of the analytic argument and expose faulty logic
- Understand the key factors that shape an issue.
- Stimulate thinking about an issue
- Uncover hidden relationships and links between key factors
- Identify developments that would cause you to abandon an assumption
- Prepare analysts for changed circumstances that could surprise them

The Method

Consider how their analysis depends on the validity of certain premises, which they do not routinely question or believe to be in doubt. A four step process will help analysts:

1. Review what the current analytic line on this issue appears to be; write it down for all to see.
2. Articulate all the premises, both stated and unstated in finished intelligence, which are accepted as true for this analytic line to be valid.
3. Challenge each assumption, asking why it “must” be true and whether it remains valid under all conditions.
4. Refine the list of key assumptions to contain only those that “must be true” to sustain your analytic line; consider under what conditions or in the face of what information these assumptions might not hold.

Questions to Ask During this Process Include:

- How much confidence exists that this assumption is correct?
- What explains the degree of confidence in the assumption?
- What circumstances or information might undermine this assumption?
- Is a key assumption more likely a key uncertainty or key factor?

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- Could the assumption have been true in the past but less so now?
- If the assumption proves to be wrong, would it significantly alter the analytic line? How?
- Has this process identified new factors that need further analysis?

Quality of Information Check: Evaluates completeness and soundness of available information sources.

When to Use

Weighing the validity of sources is a key feature of any critical thinking. Moreover, establishing how much confidence one puts in analytic judgments should ultimately rest on how accurate and reliable the information base is. Hence, checking the quality of information used in intelligence analysis is an ongoing, continuous process. Having multiple sources on an issue is not a substitute for having good information that has been thoroughly examined. Analysts should perform periodic checks of the information base for their analytic judgments. Otherwise, important analytic judgments can become anchored to weak information, and any “caveats” attached to those judgments in the past can be forgotten or ignored over time.

Value Added

A thorough review of information sources provides analysts with an accurate assessment of “what we know” and “what we do not know.” It is also an opportunity to confirm that sources have been cited accurately. In the case of HUMINT, this will require extensive review of the sources’ background information and access as well as his or her motivation for providing the information. Similarly, reviewing technical sourcing can sometimes reveal inadvertent errors in processing, translation, or interpretation that otherwise might

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have gone unnoticed. In addition, a quality of information check can be valuable to both collectors and policymakers:

- It can help to detect possible deception and denial strategies by an adversary.
- It can identify key intelligence gaps and new requirements for collectors.
- It can assist policymakers in understanding how much confidence analysts are placing on analytic judgments.

The Method

An analyst or a team might begin a quality of information check by developing a database in which information is stored according to source type and date, with additional notations indicating strengths or weaknesses in those sources. Ideally, analysts would have retrieval and search capability on the database, so that periodic reviews are less labor intensive and result in a more complete review of all sources used in past analysis. For the information review to be fully effective, analysts will need as much background information on sources as is feasible. Knowing the circumstances in which reporting was obtained is often critical to understanding its validity. With the data in hand, analysts can then:

- Review systematically all sources for accuracy.
- Identify information sources that appear most critical or compelling.
- Check for sufficient and strong corroboration of critical reporting.
- Reexamine previously dismissed information in light of new facts or circumstances that cast it in a different light.
- Ensure that any recalled reporting is identified and properly flagged for other analysts; analysis based on recalled reporting should also be reviewed to determine if the reporting was essential to the judgments made.

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- Consider whether ambiguous information has been interpreted and caveated properly.
- Indicate a level of confidence that analysts can place in sources, which are likely to figure in future analytic assessments.

Indicators or Signposts of Change: Periodically review a list of observable events or trends to track events, monitor targets, spot emerging trends, and warn of unanticipated change.

When to Use

An analyst or team can create an indicators or signposts list of observable events that one would expect to see if a postulated situation is developing; e.g., economic reform, military modernization, political instability, or democratization. Constructing the list might require only a few hours or as much as several days to identify the critical variables associated with the targeted issue. The technique can be used whenever an analyst needs to track an event over time to monitor and evaluate changes. However, it can also be a very powerful aid in supporting other structured methods explained later in this primer. In those instances, analysts would be watching for mounting evidence to support a particular hypothesis, low probability event, or scenario.

When there are sharply divided views on an issue, an indicators or signposts list can also “depersonalize” the argument by shifting analytic attention to a more objective set of criteria. Using an indicators list can clarify substantive disagreements, once all sides agree on the set of objective criteria used to measure the topic under study.

Value Added

By providing an objective baseline for tracking events or targets, indicators instill rigor into the analytic process and enhance the credibility of analytic judgments. An indicators

list included in a finished product also allows the policymaker to track developments and builds a more concrete case for the analytic judgments. By laying out a list of critical variables, analysts also will be generating hypotheses regarding why they expect to see the presence of such factors. In so doing, analysts make the analytic line much more transparent and available for scrutiny by others.

The Method

Whether used alone, or in combination with other structured analysis, the process is the same:

- Identify a set of competing hypotheses or scenarios
- Create separate lists of potential activities, statements, or events expected for each hypothesis or scenario
- Regularly review and update the indicators lists to see which are changing
- Identify the most likely or most correct hypotheses or scenarios, based on the number of changed indicators that are observed

Developing two lists of indicators for each hypothesis or scenario may prove useful to distinguish between indicators that a development is or is not emerging. This is particularly useful in a “What If?” Analysis, when it is important to make a case that a certain event is unlikely to happen.

Deception Detection: Systematic use of checklists to determine when deception actually may be present and how to avoid being deceived.

When to Use

In reality, analysts too seldom check for the possibility of deception, even when there is a well-known history of its use. The search for clues that deception is being conducted is often time consuming and requires extensive fact checking and hypothesis testing. Nonetheless, it can be critical in cases where the stakes are high. Analysts should be

concerned about the use of deception when the deceiver would have a lot to gain through his efforts and has strong capabilities to deny or manipulate US intelligence collection assets.

Value Added

Deception Detection can add rigor to analysis and reinforce the effectiveness of other analytic techniques covered in this primer. There may be times when analysts will place too much confidence in the effectiveness of other techniques covered in this primer, if they have not considered the possibility that deception may be present as well. For example, a well-developed set of indicators might actively mislead analysts, if they were partly developed from information purposely designed or fabricated by an adversary to mislead its opponents. While most analysts know they cannot assume every piece of collected intelligence is valid, few know how to adapt their daily work habits to adjust for the possibility of deception. Posing the hypothesis of deception places a considerable cognitive burden on analysts. Once accepting this possibility, it places in question all the evidence and makes it difficult to draw any inferences from the evidence with high confidence. A checklist of questions to detect possible deception can prevent the analyst from becoming paralyzed.

The Method

Analysts should routinely consider that their information base is susceptible to deception. If there is any possibility that deception could be present, a small group of analysts should assess key reporting based on four sets of criteria:

- Does a foreign actor have the motive, opportunity, and means (MOM) to deceive?
- Would this potential deception be consistent with past opposition practices (POP)?
- Do we have cause for concern regarding the manipulability of sources (MOSES)

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- What can be learned from the evaluation of evidence (EVE)?

In addition to using this deception detection technique, analysts can also employ the technique of analysis of competing hypotheses (ACH). In this case, analysts would explicitly pose deception as one of the multiple explanations for the presence or absence of information. In the counterintelligence field, the use of ACH as well as Deception Detection techniques has proven very useful.

***Analysis of Competing Hypotheses*(ACH):**

Identification of alternative explanations (hypotheses) and evaluation of all evidence that will disconfirm rather than confirm hypotheses.

When to Use

A highly effective technique when there is a large amount of data to absorb and evaluate. While a single analyst can use ACH, it is most effective with a small team that can challenge each other's evaluation of the evidence.

Developing a matrix of hypotheses and loading already collected information into the matrix can be accomplished in a day or less. If the data must be reassembled, the initial phases of the ACH process may require additional time. Sometimes a facilitator or someone familiar with the technique can lead new analysts through this process for the first time.

ACH is particularly appropriate for controversial issues when analysts want to develop a clear record that shows what theories they have considered and how they arrived at their judgments. Developing the ACH matrix allows other analysts (or even policymakers) to review their analysis and identify areas of agreement and disagreement. Evidence can also be examined more systematically, and analysts have found that this makes the technique ideal for considering the possibility of deception and denial.

Value Added

ACH helps analysts overcome three common mistakes that can lead to inaccurate forecasts:

- Analysts often are susceptible to being unduly influenced by a first impression, based on incomplete data, an existing analytic line, or a single explanation that seems to fit well enough.
- Analysts seldom generate a full set of explanations or hypotheses at the outset of a project.
- Analysts often rely on evidence to support their preferred hypothesis, but which also is consistent with other explanations.

In essence, ACH helps analysts to avoid picking the first solution that seems satisfactory instead of going through all the possibilities to arrive at the very best solution.

The Method

Explicitly identify all the reasonable alternative hypotheses, then array the evidence against each hypothesis—rather than evaluating the plausibility of each hypothesis one at a time. To create a level playing field, the process must:

- Ensure that all the information and argumentation is evaluated and given equal treatment or weight when considering each hypothesis.
- Prevent the analyst from premature closure on a particular explanation or hypothesis.
- Protect the analyst against innate tendencies to ignore or discount
- Information that does not fit comfortably with the preferred explanation at the time.
- To accomplish this, the process should follow these steps:
- Brainstorm among analysts with different perspectives to identify all possible hypotheses.
- List all significant evidence and arguments relevant to all the hypotheses.

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- Prepare a matrix with hypotheses across the top and each piece of evidence on the side. Determine whether each piece of evidence is consistent, inconsistent, or not applicable to each hypothesis.⁵
- Refine the matrix and reconsider the hypotheses—in some cases, analysts will need to add new hypotheses and re-examine the information available.
- Focus on disproving hypotheses rather than proving one. Tally the pieces of evidence that are inconsistent and consistent with each hypothesis to see which explanations are the weakest and strongest.
- Analyze how sensitive the ACH results are to a few critical items of evidence; should those pieces prove to be wrong, misleading, or subject to deception, how would it impact an explanation's validity?
- Ask what evidence is not being seen but would be expected for a given hypothesis to be true. Is denial and deception a possibility?
- Report all the conclusions, including the weaker hypotheses that should still be monitored as new information becomes available.
- Establish the relative likelihood for the hypotheses and report all the conclusions, including the weaker hypotheses that should still be monitored as new information becomes available.
- Identify and monitor indicators that would be both consistent and inconsistent with the full set of hypotheses. In the latter case, explore what could account for inconsistent data.

Contrarian Techniques

Devil's Advocacy: Challenging a single, strongly held view or consensus by building the best possible case for an alternative explanation.

When to Use

Most effective when used to challenge an analytic consensus or a key assumption regarding a critically important intelligence question. On those issues that one cannot afford to get wrong, Devil's Advocacy can provide further confidence that the current analytic line will hold up to close scrutiny. An individual analyst can often assume the role of the Devil's Advocate if he or she has some doubts about a widely held view, or a manager might designate a courageous analyst to challenge the prevailing wisdom in order to reaffirm the group's confidence in those judgments. In some cases, the analyst or a team can review a key assumption of a critical judgment in the course of their work, or more likely, a separate analytic product can be generated that arrays all the arguments and data that support a contrary hypothesis. While this can involve some analytic time and effort, when a group of analysts have worked on an issue for a long period of time, it is probably wise to assume that a strong mind-set exists that deserves the closer scrutiny provided by Devil's Advocacy.

Value Added

Analysts have an obligation to policymakers to understand where their own analytic judgments might be weak and open to future challenge. Hence, the Devil's Advocacy process can highlight weaknesses in a current analytic judgment or alternatively help to reaffirm one's confidence in the prevailing judgments by:

- Explicitly challenging key assumptions to see if they will not hold up under some circumstances.
- Identifying any faulty logic or information that would undermine the key analytic judgments.

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- Presenting alternative hypotheses that would explain the current body of information available to analysts.

Its primary value is to serve as a check on a dominant mind-set that can develop over time among even the best analysts who have followed an issue and formed strong consensus that there is only one way of looking at their issue. This mindset phenomenon makes it more likely that contradictory evidence is dismissed or not given proper weight or consideration. An exercise aimed at highlighting such evidence and proposing another way of thinking about an issue can expose hidden assumptions and compel analysts to review their information with greater skepticism about their findings. The analyst could come away from the exercise more certain that: 1) the current analytic line was sound; 2) the argument is still the strongest, but that there are areas where further analysis is needed; or 3) some serious flaws in logic or supporting evidence suggest that the analytic line needs to be changed or at least caveated more heavily.

The Method

To challenge the prevailing analytic line, the Devil's Advocate must:

- Outline the mainline judgment and key assumptions and characterize the evidence supporting that current analytic view.
- Select one or more assumptions—stated or not—that appear the most susceptible to challenge.
- Review the information used to determine whether any is of questionable validity, whether deception is possibly indicated, or whether major gaps exist.
- Highlight the evidence that could support an alternative hypothesis or contradicts the current thinking.
- Present to the group the findings that demonstrate there are flawed assumptions, poor quality evidence, or possible deception at work.

- Consider drafting a separate contrarian paper that lays out the arguments for a different analytic conclusion if the review uncovers major analytic flaws.
- Be sure that any products generated clearly lay out the conventional wisdom and are identified as an explicitly “Devil’s Advocate” project; otherwise, the reader can become confused as to the current official view on the issue.

Team A/Team B: Use of separate analytic teams that contrast two (or more) strongly held views or competing hypotheses.

When to Use

If there are at least two competing views within an analytic office or perhaps competing opinions within the policymaking community on a key issue, then Team A/Team B analysis can be the appropriate technique to use. Developing a full-blown Team A/Team B exercise requires a significant commitment of analytic time and resources, so it is worthwhile considering if the analytic issue merits this kind of attention. A longstanding policy issue, a critical decision that has far-reaching implications or a dispute within the analytic community that has obstructed effective cross-agency cooperation would be grounds for using Team A/Team B. If those circumstances exist, then analysts will need to review all of the data to develop alternative papers that can capture the essential differences between the two viewpoints.

Value Added

Managers have found that when there are office tensions among competing factions of analysts, a Team A/Team B approach can help opposing experts see the merit in the other group’s perspective. The process of conducting such an exercise can reduce the friction and even narrow the differences. At a minimum, it allows those holding opposing

views to feel that their views have been given equal attention.

For the policymaker, this technique helps to surface and explain important analytic differences within the expert community. Often senior officials can learn more by weighing well-argued conflicting views than from reading an assessment that masks substantive differences or drives analysis to the lowest common denominator. By making the key assumptions and information used for each argument more transparent, a policymaker can judge the merits of each case, pose questions back to the analysts, and reach an independent judgment on which argument is the strongest. Moreover, highlighting alternative views puts collectors on notice that they need to be searching for new information that can confirm or disconfirm a range of hypotheses.

If opposing positions are well established, it can be useful to place analysts on teams that will advocate positions they normally do not support; forcing analysts to argue “the other side” can often make them more aware of their own mind-set.

The Method

Analysis Phase: A Team A/Team B exercise can be conducted on an important issue to:

- Identify the two (or more) competing hypotheses or points of view.
- Form teams or designate individuals to develop the best case that can be made for each hypothesis.
- Review all pertinent information that supports their respective positions.
- Identify missing information that would buttress their hypotheses.
- Structure each argument with an explicit presentation of key assumptions, key pieces of evidence, and careful articulation of the logic behind the argument.

Debate Phase: An oral presentation of the alternative arguments and rebuttals in parallel fashion can then be organized for the benefit of other analysts:

- Set aside time for an oral presentation of the alternative team findings; this can be an informal brainstorming session or a more formal “debate.”
- Have an independent “jury of peers” listen to the oral presentation and be prepared to question the teams regarding their assumptions, evidence, or logic.
- Allow each team to present their case, challenge the other team’s arguments, and rebut the opponent’s critique of its case.
- Let the jury consider the strength of each presentation and recommend possible next steps for further research and collection efforts.

High-Impact/Low-Probability Analysis: Highlights a seemingly unlikely event that would have major policy consequences if it happened.

When to Use

A contrarian technique that sensitizes analysts to the potential impact of seemingly low probability events that would have major repercussions on US interests. Using this technique is advisable when analysts and policymakers are convinced that an event is unlikely but have not given much thought to the consequences of its occurrence. In essence, this can be a warning that the intelligence and policy communities must be alert to an unexpected but not impossible event.

Value Added

Mapping out the course of an unlikely, yet plausible, event can uncover hidden relationships between key factors and assumptions; it also can alert analysts to oversights in the mainstream analytic line. In addition, an examination of the “unthinkable” allows analysts to develop signposts that may

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provide early warning of a shift in the situation. By periodically reviewing these indicators an analyst is more likely to counter any prevailing mind-set that such a development is highly unlikely.

The Method

If there is a strongly held view that an event is unlikely, then postulating precisely the opposite should not be difficult.

- Define the high-impact outcome clearly. This process is what will justify examining what most analysts believe to be a very unlikely development.
- Devise one or more plausible explanations for or “pathways” to the low probability outcome. This should be as precise as possible, as it can help identify possible indicators for later monitoring.
- Insert possible triggers or changes in momentum if appropriate. These can be natural disasters, sudden health problems of key leaders, or new economic or political shocks that might have occurred historically or in other parts of the world.
- Brainstorm with analysts having a broad set of experiences to aid the development of plausible but unpredictable triggers of sudden change.
- Identify for each pathway a set of indicators or “observables” that would help you anticipate that events were beginning to play out this way.
- Identify factors that would deflect a bad outcome or encourage a positive outcome.

“What If?” Analysis: Assumes that an event has occurred with potential (negative or positive) impact and explains how it might come about.

When to Use

A technique for challenging a strong mindset that an event will not happen or that a confidently made forecast may not be entirely justified. It is similar to a High- Impact/Low-

Probability analysis, but it does not dwell on the consequences of the event as much as it accepts the significance and moves directly to explaining how it might come about.

Value Added

By shifting the focus from whether an event could occur to how it may happen, analysts allow themselves to suspend judgment about the likelihood of the event and focus more on what developments—even unlikely ones—might enable such an outcome. An individual analyst or a team might employ this technique and repeat the exercise whenever a critical analytic judgment is made.

Using this technique is particularly important when a judgment rests on limited information or unproven assumptions. Moreover, it can free analysts from arguing about the probability of an event to considering its consequences and developing some indicators or signposts for its possible emergence. It will help analysts address the impact of an event, the factors that could cause—or alter—it, and likely signposts that an event is imminent.

A “What If?” analysis can complement a difficult judgment reached and provide the policymaker a thoughtful caution to accepting the conventional wisdom without considering the costs and risks of being wrong. This can help decision makers consider ways to hedge their bets, even if they accept the analytic judgment that an event remains unlikely.

The Method

“What If?” analysis must begin by stating clearly the conventional analytic line and then stepping back to consider what alternative outcomes are too important to dismiss, even if unlikely. Brainstorming over a few days or weeks can develop one or more plausible scenarios by which the unlikely event occurs:

- Assume the event has happened.

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- Select some triggering events that permitted the scenario to unfold to help make the “what if” more plausible; for example, analysts might postulate the death of a leader, a natural disaster, or some economic event that would start a chain of other events.
- Develop a chain of argumentation based as much on logic as evidence to explain how this outcome could have come about.
- “Think backwards” from the event in concrete ways—that is, specifying what must actually occur at each stage of the scenario is often very useful.
- Identify one or more plausible pathways or scenarios to the unlikely event; very often more than one will appear possible.
- Generate a list of indicators or “observables” for each scenario that would help to detect the beginnings of the event.
- Consider the scope of the positive and negative consequences of each scenario and their relative impacts.
- Monitor the indicators developed on a periodic basis.

Imaginative Thinking Techniques

Brainstorming: an unconstrained group process designed to generate new ideas and concepts.

When to Use

A technique for stimulating new thinking and it can be applied to virtually all of the other structured analytic techniques as an aid to thinking. Typically, analysts will brainstorm when they begin a project to help generate a range of hypotheses about their issue.

Brainstorming, almost by definition, involves a group of analysts meeting to discuss a common challenge; a modest investment of time at the beginning or critical points of a

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project can take advantage of their different perspectives to help structure a problem. This group process allows others to build on an initial idea suggested by a member of the brainstorming session.

An individual analyst also can brainstorm to produce a wider range of ideas than a group might generate, without regard for other analysts' egos, opinions, or objections. However, an individual will not have the benefit of others' perspectives to help develop the ideas as fully. Moreover, an individual may have difficulty breaking free of his or her cognitive biases without the benefit of a diverse group.

Value Added

This technique can maximize creativity in the thinking process, force analysts to step outside their normal analytic mind-sets, and suspend their typical “good judgment” about the practicality of ideas or approaches. More generally, brainstorming allows analysts to see a wider range of factors that might bear on the topic than they would otherwise consider. Analysts typically censor out ideas that seem farfetched, poorly sourced, or seemingly irrelevant to the question at hand. Brainstorming gives permission to think more radically or “outside the box.” In particular, it can spark new ideas, ensure a comprehensive look at a problem or issues, raise unknowns, and prevent premature consensus around a single hypothesis.

The Method

Paradoxically, brainstorming should be a very structured process to be most productive. An unconstrained, informal discussion might produce some interesting ideas, but usually a more systematic process is the most effective way to break down mind-sets and produce new insights. In particular, the process involves a divergent thinking phase to generate and collect new ideas and insights, followed by a convergent phase in which ideas are grouped and organized around key concepts. Some of the simple rules to be followed include:

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- Never censor an analyst's ideas no matter how unconventional they might sound.
- Rather find out what prompted the thought, as it might contain the seeds of an important connection between the topic and an unstated assumption.
- Give yourself enough time to do brainstorming correctly. It usually takes one hour to set the "rules" of the game, get the group comfortable, and exhaust the conventional wisdom on the topic. Only then will the truly creative ideas begin to emerge.
- Involve at least one "outsider" in the process—that is, someone who does not share the same educational background, culture, technical knowledge or mindset as the core group but has some familiarity with the topic.

A two-phase, twelve-step, structured process is often used to get the most out of the brainstorming sessions:

Divergent Thinking Phase:

- Distribute "Post-It" notes and pens or markers to all participants. Typically, 10-12 people work best.
- Pose the problem in terms of a "focal question." Display it in one sentence on a large easel or whiteboard.
- Ask the group to write down responses to the question, using key words that will fit on the small "Post-It" note.
- Stick all the notes on a wall for all to see—treat all ideas the same.
- When a pause follows the initial flow of ideas, the group is reaching the end of their conventional thinking and the new divergent ideas are then likely to emerge.
- End the "collection stage" of the brainstorming after two or three pauses.

Convergent Thinking Phase:

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- Ask the participants as a group to rearrange the notes on the wall according to their commonalities or similar concepts. No talking is permitted. Some notes may be moved several times as notes begin to cluster. Copying some notes is permitted to allow ideas to be included in more than one group.
- Select a word or phrase that characterizes each grouping or cluster once all the notes have been arranged.
- Identify any notes that do not easily fit with others and consider them either useless noise or the beginning of an idea that deserves further attention.
- Assess what the group has accomplished in terms of new ideas or concepts identified or new areas that need more work or further brainstorming.
- Instruct each participant to select one or two areas that deserve the most attention. Tabulate the votes.
- Set the brainstorming group's priorities based on the voting and decide on the next steps for analysis.

Outside-In Thinking: Used to identify the full range of basic forces, factors, and trends that would indirectly shape an issue.

When to Use

At the conceptualization of an analytic project, when the goal is to identify all the critical, external factors that could influence how a particular situation will develop. It would work well for a group of analysts responsible for a range of functional and/or regional issues. When assembling a large database that must identify a number of information categories or database fields, this technique can aid in visualizing the entire set of categories that might be needed in a research effort. Often analysts realize only too late that some additional information categories will be needed and then must go back and review all previous files and recode the data. With a modest amount of effort, "Outside-in

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Thinking” can reduce the risk of missing important variables early in the analytic process.

Value Added

Most analysts spend their time concentrating on familiar factors within their field or analytic issue. That is, they think from the “inside”—namely, what they control—out to the broader world. Conversely, “thinking from the outside-in” begins by considering the external changes that might, over time, profoundly affect the analysts’ own field or issue. This technique encourages analysts to get away from their immediate analytic tasks (the so-called “inbox”) and think about their issues in a wider conceptual and contextual framework. By recasting the problem in much broader and fundamental terms, analysts are more likely to uncover additional factors, an important dynamic, or a relevant alternative hypothesis.

The Method

Develop a generic description of the problem or the phenomenon under study. Then:

- List all the key forces (social, technological, economic, environmental, and political) that could have an impact on the topic, but over which one can exert little influence (e.g., globalization, social stress, the Internet, or the global economy).
- Focus next on key factors over which an actor or policymaker can exert some influence. In the business world this might be the market size, customers, the competition, suppliers or partners; in the government domain it might include the policy actions or the behavior of allies or adversaries.
- Assess how each of these forces could affect the analytic problem.
- Determine whether these forces actually do have an impact on the particular issue based on the available evidence.

Red Team Analysis: Note: UFMCS refers to the method described below as an Initiatives Group. *Models the behavior of an individual or group by trying to replicate how an adversary would think about an issue.*

When to Use

Frequently, analysts face the challenge of forecasting how a foreign leader or decision-making group may behave when it is clear that there is a risk of falling into a “mirror-image” problem. That is, analysts can sometimes impute to a foreign actor the same motives, values, or understanding of an issue that they hold. Traditional analysis sometimes assumes that foreign leaders or groups will behave “rationally” and act as the analysts would if faced with the same threats or opportunities. History has shown that foreign leaders often respond differently to events because of different cultural, organizational, or personal experiences. Red Team analysis tries to consciously place analysts in the same cultural, organizational, and personal setting (“putting them in their shoes”) in which the target individual or group operates. Whereas analysts normally work from the position of the “blue” (friendly forces), a “red” team of analysts attempts to work in the environment of the hostile forces.

Value Added

Like Devil’s Advocacy and Team A/Team B techniques, Red Team analysis is aimed at freeing the analyst from the prison of a well-developed mind-set; in this case, the analyst’s own sense of rationality, cultural norms, and personal values. Whereas analysts usually operate as “observers” of a foreign adversary, the Red Team technique transforms the analyst into an “actor” operating within the adversary’s culture and political milieu. This form of “role playing” is useful when trying to replicate the mind-set of authoritarian leaders, terrorist cells, or other non-Western groups that operate under very different codes of behavior or motivations. Often this technique can introduce new or different stimuli that might not have been factored into traditional analysis—such

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as the target's familial ties or the international political, economic, and military pressures felt by the individual. For example, Red Team participants might ask themselves: "What would my peers, family, or tribe expect me to do? Alternatively, a Red Team analyst might pose the question to his colleagues: "How do we perceive the external threats and opportunities?" Finally, the Red Team technique can factor into its analysis the way in which personal power and status might influence a target's behavior.

The Method

Build a team of experts with in-depth knowledge of the operating environment, the target's personality, and the style of thinking used. The team should be populated not just with those who understand the language, but also with people, who might have experienced the culture, share the ethnic background, or have worked in a similar operational environment. Once established and separated from traditional analysis, the team members should:

- Put themselves in the adversary's circumstances and react to foreign stimuli as the target would.
- Develop a set of "first-person" questions that the adversary would ask, such as: "How would I perceive incoming information; what would be my personal concerns; or to whom would I look for an opinion?"
- Draft a set of policy papers in which the leader or group makes specific decisions, proposes recommendations, or lays out courses of actions. The more these papers reflect the cultural and personal norms of the target, the more they can offer a different perspective on the analytic problem.

Red Team analysis is not easy to conduct. It requires significant time to develop a team of qualified experts who can think like the adversary. The team has to distance itself from the normal analysis and work as though living in the target's world. Without a sophisticated understanding of the culture, operational environment, and personal histories of

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the foreign group, analysts will not be able to behave or think like the enemy. Analysts can never truly escape their own experiences and mindsets, but this technique can at least prevent them from falling into “mirror-imaging” unconsciously.

The most novel feature of Red Team analysis is its presentation.

- The analysis is often in a “first person” format—that is, drafted as memos to or from a leader or group.
- Red Team analysis avoids the use of caveats or qualifications and assumes that the recipient understands that the paper is aimed more at provoking thought or challenging the conventional understanding of how an adversary thinks.
- Such papers are rarely coordinated among other experts and do not purport to represent the consensus view on an issue.

Red Team papers do not plot out all possible courses of action but seek to give a prediction based on the target’s special personal, organizational, or cultural experiences.

Alternative Futures Analysis: Systematically explores multiple ways a situation can develop when there is high complexity and uncertainty.

When to Use

Most useful when a situation is viewed as too complex or the outcomes as too uncertain to trust a single outcome assessment. First, analysts must recognize that there is high uncertainty surrounding the topic in question. Second, they, and often their customers, recognize that they need to consider a wide range of factors that might bear on the question. And third, they are prepared to explore a range of outcomes and are not wedded to any preconceived result. Depending on how elaborate the futures project, the effort can amount to considerable investment in time, analytic

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resources, and money. A team of analysts can spend several hours or days organizing, brainstorming, and developing multiple futures; alternatively, a larger-scale effort can require preparing a multi-day workshop that brings together participants (including outside experts). Such an undertaking often demands the special skills of trained scenario-development facilitators and conferencing facilities. This technique is a sharp contrast to contrarian techniques, which try to challenge the analysts' high confidence and relative certitude about an event or trend. Instead, multiple futures development is a divergent thinking technique that tries to use the complexity and uncertainty of a situation to describe multiple outcomes or futures that the analyst and policymaker should consider, rather than to predict one outcome.

Value Added

Extremely useful in highly ambiguous situations, when analysts confront not only a lot of “known unknowns” but also “unknown unknowns.” What this means is that analysts recognize that there are factors, forces, and dynamics among key actors that are difficult to identify without the use of some structured technique that can model how they would interact or behave. As the outcomes are not known prior to the futures exercise, analysts must be prepared for the unexpected and willing to engage in a more free-wheeling exchange of views than typically occurs in order to “imagine the future.” Given the time and resources involved, scenario analysis is best reserved for situations that could potentially pose grave threats or otherwise have significant consequences.

From past experience, analysts have found that involving policymakers in the alternative futures exercise is the most effective way to communicate the results of this exploration of alternative outcomes and sensitize them to key uncertainties. Most participants find the process of developing such scenarios as useful as any finished product

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that attempts to capture the results of the exercise. Analysts and policymakers can benefit from this technique in several ways:

- It provides an effective means of weighing multiple unknown or unknowable factors and presenting a set of plausible outcomes.
- It can help to bound a problem by identifying plausible combinations of uncertain factors.
- It provides a broader analytic framework for calculating the costs, risks, and opportunities presented to policymakers by different outcomes.
- It aids analysts and policymakers in anticipating what otherwise would be surprising developments by forcing them to challenge assumptions and consider possible “wild cards” or discontinuous events.
- It generates indicators to monitor for signs that a particular future is becoming more or less likely, so that policies can be reassessed.

The Method

The most common approach used in both the public and private sectors involves the following steps:

- Develop the “focal issue” by systematically interviewing experts and officials who are examining the general topic.
- Convene a group of experts (both internal and external) to brainstorm about the forces and factors that could affect the focal issue.
- Select by consensus the two most critical and uncertain forces and convert these into axes or continua with the most relevant endpoints assigned.
- Establish the most relevant endpoints for each factor; e.g., if economic growth were the most critical, uncertain force, the endpoints could be “fast” and “slow” or “transformative” and “stabilizing” depending on the type of issue addressed.

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- Form a futures matrix by crossing the two chosen axes. The four resulting quadrants provide the basis for characterizing alternative future worlds.
- Generate colorful stories that describe these futures and how they could plausibly come about. Signposts or indicators can then be developed.

Participants, especially policymakers, can then consider how current decisions or strategies would fare in each of the four worlds and identify alternative policies that might work better either across all the futures or in specific ones. By anticipating alternative outcomes, policymakers have a better chance of either devising strategies flexible enough to accommodate multiple outcomes or of being prepared and agile in the face of change.

Strategies for Using Structured Analytic Techniques

These structured analytic techniques can be used in a variety of ways when analysts begin a new assessment. Some can be used equally effectively at multiple points in the process and can promote an analyst's ability to keep an open mind, to consider multiple—including highly unlikely—hypotheses, to challenge conventional wisdom, and to assess the impact of important information gaps or deception on analytic judgments and confidence levels. The Timeline for Using Analytic Techniques provides some thoughts on when to use one or more of them during the course of an analyst's research and writing.

Starting Out

At the beginning of an analytic project, analysts are always wise to consider brainstorming and assumptions checks to ensure that important factors are not being missed or taken for granted. Similarly, outside-in-thinking can sometimes put an analytic project into a broader international context, in which factors outside the lead analyst's area of responsibility might impact on his or her analytic judgments. For instance,

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economic assumptions about the price of oil might be key to a regional political analyst's understanding the prospects for political stability in an oil-exporting country or an underdeveloped country entirely dependent on expensive energy imports. A High Impact/Low Probability assessment can also sensitize analysts early on to the significance of dramatic events that might affect their analytic lines.

Some techniques like Indicators and Signposts or Analysis of Competing Hypotheses (ACH) can be useful throughout a project and revisited periodically as new information is absorbed and analyzed. ACH, in particular, is a good tool to use throughout a project to prevent premature closure and to highlight evidence that is most “discriminating” in making an analytic argument. Alternative Futures analysis is similarly useful at the beginning of a project, but can amount to the structure for the entire project.

Hypothesis Testing

As an analytic project takes shape, and hypotheses are being formed about the key intelligence question, it can be appropriate to use one or another contrarian technique to challenge the conventional analytic line that is being developed. If the assessment contains strong judgments about an adversary's behavior, then challenging this view with a “Red Team” effort might be a good corrective to too much of a rational actor approach. In addition, a review of intelligence gaps at this juncture can also help give the analysts a better degree of confidence in the information base and judgments reached in the assessment.

A Final Check

As the assessment is being finalized, it can still be useful to review key assumptions as a sanity check on the underlying logic of the analysis. A brainstorming session also may be helpful to ensure that no plausible hypothesis has been dismissed or left unaddressed. If a firm consensus has formed around an analytic line and has not been seriously questioned in some time, then a Devil's Advocacy exercise

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could be useful. Analysts might also use a final review to decide if they have identified a list of key indicators for future developments. This can be an important guide to include in the assessment as a way to track future developments and monitor whether the analytic judgments reached are being realized or in need of revision.

Notes:

SECTION XII: Briefing Standards

Proposed Introductory Red Team Briefing



Red Team Definition

A function that provides commanders an independent capability to fully explore alternatives in plans, operations, concepts, organizations and capabilities in the context of the operational environment and from the perspectives of partners, adversaries and others.

- Alternative perspectives from a trained, educated, and functional team
- Cultural tool kit to consider adversaries and coalition partners
- Communication, negotiation, and RT TTP capability for internal critical analysis or review without being a disruptive force
- Theoretical analysis of complex situations
- How the enemy and other stakeholders think!



"...enable the Army to escape the gravitational pull of western military thought..."

Gen Schoomaker

8/17/2009 10:05 AM

3



Three Red Team Focus Areas



Goal: Improve Decision Making in Planning and Operations (Alternatives)

Tasks

- Broaden understanding of the variables found in the Operational Environment (OE) and stakeholders perspectives affecting planning and operations.
- Better problem identification, end states definition and assessment measures.
- Identify gaps, vulnerabilities, opportunities and faults and unstated assumptions.

Goal: Improve Decision Making and Problem Solving

Tasks

- Independent critical reviews and analysis of concepts, doctrine, and new organizational designs.
- Insure OE accounted for in experiments, concepts, and war games.

Goal: Improve Understanding of Enemy, Estimates and Better Synchronization of Intel and Ops.

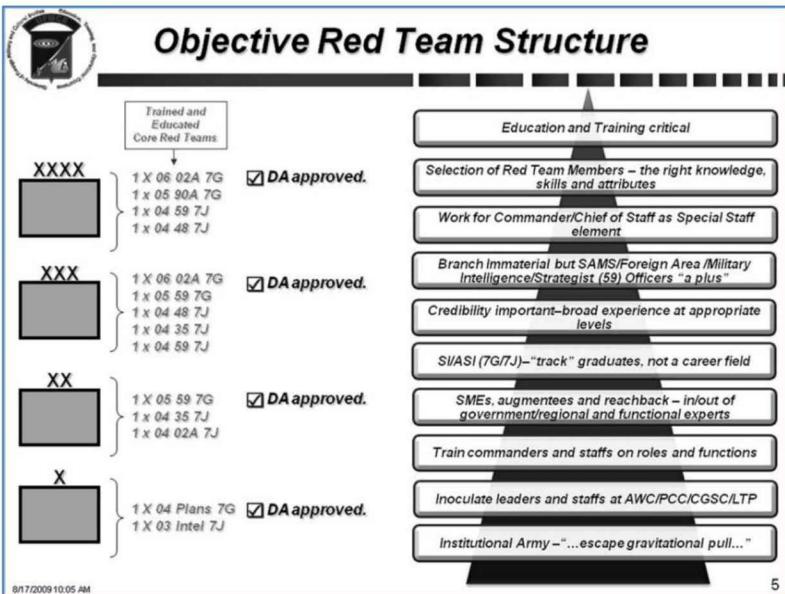
Tasks

- Think like Enemy.
- Account for culture and other variables of the Operational Environment.
- Alternative (Competitive) Analysis.
- Insure enemy is appropriately war gamed.

Commonality: Critical Thinking and Analysis to Challenge and Provide Alternatives

7/1/2009 8:07 AM

4





Red Team and Human Terrain Competencies

- **Human Terrain Team**
 - Local cultural understanding and perspectives
 - Field work – collection and research
 - Focused on bringing external academic expertise to the BCT and above
 - Regional academic expertise or some aspect of Social Science useful to understanding the region
 - Red team on staff is both a customer of HTT and an advocate for their use
- **Red Team**
 - Internal to the staff
 - Assigned to unit fulltime with RT Skill Identifier
 - Ideally the Red Team is selected by the commander for ability to think differently
 - Decision making centric
 - Local alternative perspective only a small subset of what RTs provides to the staff and where available HTT is the agent for bringing that in.
 - Improve decision making by avoiding missteps inherent in group/staff organizations
 - Group think
 - Mirror imaging
 - Tunnel vision
 - Oversimplification of complexity
 - etc
 - Tools are TTP for creative and critical thinking about a problem, pre-mortem analysis, stakeholder analysis, string of pearls, Shi, 4 ways of seeing etc.
 - Works as a staff element within the MDDMP process – HTT is a collection and perspectives source

04/2009 10:05 AM

7

Briefing 101

'Knowing the audience' is key to success. Who are the formal and informal decision makers or influencers? What are their prejudices? What is foremost in their mind as they enter the briefing (whether about the topic at hand or some other pressing issue)? Additionally, no one should give the same briefing twice. Even if it is a 'canned' brief, the audience is different and the presentation should reflect each variance, 'no man crosses the same river twice as the man and the river have both changed'.

- Seven (7) slide rule is in effect
 - Includes the cover slide, as well as each build of a slide
 - Ensures the brief is a brief vice a theatrical production
- Practice good slide-ology
 - Do not squeeze everything on the slide, avoid clutter
 - Dark text is not easily viewed on a dark background
 - Test colors/format in the venue you will use
 - Aim for brevity (bullets fewer and shorter)
 - Slide should speak for itself
- Back up slides are permissible in any number
 - Use only when the decision maker requests amplification
 - Know the slide number/location to avoid scrolling through the deck
- Have appropriate supporting props, i.e., maps, pointer, butcher block, etc.
 - Do not wave or "dance" your pointer on the screen
 - Rehearse, rehearse, and rehearse again!
- Consider the role of the audience, knowing the material, and being prepared is requisite but insufficient alone.

Elevator Briefs

Toastmasters⁹⁸ developed a technique to get key ideas in the mind of busy decision makers. They saw a 'brief' to their very busy boss, while on an 'elevator'. They imagined one shot of less than 3 minutes of undivided attention to make a specific point.

Elevator briefs:

- a. target a key person
- b. focus on a few key points
- c. are the core of a broader message
- d. can be executed in 3 minutes or less
- e. can be offered in a public, somewhat confined and controllable space

Qualities of an elevator brief:

- The *opening* grabs the listener's attention
- A quick summary of the bigger message (*bumper stickers*)
- Ends with some clearly stated 'way ahead'.

In execution, the quick summary becomes three or less clearly stated, simple to remember ideas. Carefully select a few words that summarize the most important point to communicate (*bumper stickers*). For example: the *five S's* pertaining to POW handling, or the U.S. Army mantra about *One team, one fight!* The 'way ahead' CANNOT include any requests for a major decision. Instead, it might be:

- "Would you like me to send you a short paper on the topic?"
- "Would you like me to schedule a more in depth brief - can I get on your calendar?"
- "Would you like to give me your permission to explore one of the bumper stickers and follow up at a later time?"

⁹⁸ Toastmasters helps people become more competent and comfortable in front of an audience, <http://www.toastmasters.org/>

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Notes: _____

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