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The Art of “Campaigning” to Inform and Influence

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The purpose of this article is to benefit Corps, Division, and Brigade commanders and their staffs who know through experience and education that the purpose of military action is, in every case, to affect the behavior of various groups of human beings in the mission environment toward some greater purpose. They also know that mission successes depend, among other things, on successfully “Informing” the decisions of those who are supporters (or potential supporters) of the aims of the command’s military operations, and on “Influencing” the decisions of those who are, or could be, implacable foes and irreconcilable adversaries. No human endeavor is more difficult than this. And no human endeavor this important is more worthy of careful study.

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Introduction

This paper is my final contribution to a project of several years. The “Re-Thinking IO” project began the fall of 2006 for then LTG David Petraeus, the Information Operations (IO) proponent and at the time also the Commanding General of the Combined Arms Center at Ft. Leavenworth. The fruit of this effort so far has been six articles published in Military Review, offering insights and advice on various aspects of the challenges IO practitioners have to overcome.¹ I have come to see that it is not IO practitioners I need to address, but Corps, Division, and Brigade Commanders and their staffs. And it is not some aspect of IO, or a successor “Informing and Influencing” function, I need to address, but it is about the nature of Corps, Division, and Brigade “campaigns” to “affect the behavior of various groups of human beings in the mission environment toward some greater purpose.” It is when extended tactical operations become “campaigns” that such mission efforts become purposeful, coherent and fruitful.

This paper is an effort of synthesis. It brings together what I have learned about campaigning, about causation in unbounded and turbulent human mission environments, and about natural and human systems of learning and adaptation. I wish I knew more. But this paper follows a journey of my learning over the past four or more years.

The first stop on this journey is a brief review of what I learned about the art of “keeping friends and gaining allies” and “unifying the psychological and physical impact of operations” while engaged in “Re-Thinking IO.”

The next stop takes me to some very recent learning that occurred as a result of being asked to observe and comment on an effort to decide doctrinal questions regarding how the “Inform and Influence” staff functions should be organized and performed on a Division Staff.² I learned several things. The first of these was that today’s staffs are still chiefly organized to manage short-term tactical decision cycles for achieving the concrete and well understood results demanded by the missions of yesterday. They are not organized to help the commander make the more important choices of campaigning – not those of “doing things right,” but those of “doing the right thing.” In other words, they are not organized for the pursuit of missions that are ambiguous and conceptual, that require deciding what

¹ The fruit of this effort was a series of articles published in Military Review between November of 2008 and July of 2010. “Rethinking IO: Complex Operations in the Information Age” Nov/Dec 2008. “Systemic Operational Design: Learning and Adapting in Complex Missions” Jan/Feb 2009, “Unifying Physical and Psychological Impact During Operations” Mar/April 2009, “Keeping Friends and Gaining Allies: The Indivisible Challenge of Military Public Relations” May/June 2009, “Net War: Winning in the Cyberelectromagnetic Dimension of Full Spectrum Operations” March/April 2010, and “Warfare by Internet” July/August 2010.

²See, “Reflections on Talon Strike/Omni Fusion 10: The Challenge of Learning About Complex Tasks and Missions From Simulation Based Exercises”, dated 2 June 2010.

concrete outcomes to bring about, and in what pattern, and making decisions that invariably deal with coming to terms with several groups of humans at once in complex mission environments. And while all commanders have made organizational modifications to suit them better, the legacy of the past weighs on them heavily. In this paper I return to this theme at the end as I bind things together.

The second of these was that the US Army is still treating the “Inform and Influence” functions as if they were some kind of “information” artillery, firing “information effects” at a target. And we are greatly underestimating the requirement for feedback for this function, especially in light of the very robust feedback mechanisms the Fires function requires to accomplish a much easier task, adjusting rounds onto the target according to the laws of physics. And we don’t understand the difference between the decision cycles of functions, like artillery, which operate in the concrete world of physics to produce concrete outcomes, and complex functions that operate in the world of human decision-making and relationships that produce new human relationships and systems of relationships. As a result of this experience, I have learned a useful way to distinguish between “complicated” and “complex” functions, and “complicated” and “complex” mission environments and the different natures of “tactical” and “strategic”³ choices. And I have learned to think in terms of “tactical” decision cycles turning within “strategic” decision cycles in the course of extended operations. And I have learned that there is utility in understanding the difference between “tactical” learning, and adaption and “strategic” learning and adaption.

³ Strategy and strategic here are used in a general historic way, implying a long term judgment about a complex matter and a specific kind of “way” that exploits the potential for desired change within the situation. The meaning will become clear later in the paper.

The third stop on the journey of learning takes us to what I learned from our Australian allies in 2005 and 2006 about the natural processes of learning and adaption pertinent to complex environments, and how they adapted the logic of these natural processes to their concepts of operations. It is startling to learn that even simple organisms have the capability to learn at five levels. Here we learn how to apply that knowledge to organizations of thinking humans. This learning experience was an aid to understanding the difference between “tactical” and “strategic” learning, and the real difficulties of the latter.

The fourth, and final, stop is a synthesis of all this against the backdrop of a professional lifetime⁴ of reflection on the nature of command decision-making, of campaigning, of tactics and strategy, their relationships, and their differences. Here I propose one restructured way to think about campaigning and lines of effort within campaigns, and another (familiar) way about the short-term tactical actions of which they are comprised. And I propose a logic for organizing staff effort to facilitate the kinds of decision-making, learning, and adaptation campaigning commanders need to make while campaigning to “affect the behavior of various groups of human beings in the mission environment toward some greater purpose.” It is by restructuring our thinking about these things that we come to understand that campaign lines of effort are successful only when we consciously and deliberately manage their tactical decision, learning and adaptation cycles within larger “strategic” decision, learning and adaptation cycles. We do this somewhat already in a subconscious way, but we allow the tactical cycles to dominate our thinking. In the mean time, we also learn about a useful logic and theory of “campaigning” at various levels of command. And we learn that campaigning lines of effort, in every case, depend for success on successfully “In-

⁴ Since July 5th, 1960.

forming” the decisions of those who are supporters (or potential supporters) of the aim of any particular campaign line of effort, and on “Influencing” the decisions of those who are, or could be, actively opposing it. And we see that complex functions, such as the Inform and Influence functions, provide the greatest

“value added” when their feedback mechanisms for learning about and adapting new ways to Inform and Influence are embedded into the feedback mechanisms for learning and adapting needed to achieve the aims of campaign lines of effort.

Part I: Two Broad and Practical Purposes and the Theory That Applies

A previous article (Rethinking “IO”: Complex Operations in the Information Age, Nov/Dec 2008 issue of Military Review) outlined the practical purposes of what was then called Information Operations (IO) resulting from my study for the US Army’s Information Proponent. I found that the real aim of commanders and their Inform and Influence practitioners was, and still is, to contribute to two broad and practical purposes essential to the success of all highly complex missions.

One of these is to win the psychological contest with real and potential adversaries. And I learned that the best way to influence their decisions was to unify the physical and psychological impact of operations.

The other one is to keep the trust and confidence of home and allied publics while gaining the confidence and support of local populations. And I learned that the best way to do that was to treat these twin challenges as one. Keeping trust and confidence at home and gaining it in the mission environment must be treated as indivisible in the modern world, and the principles of informing, rather than influencing, decisions applies.

These two functions, influencing the decisions of adversaries and informing the decisions of supporters, are distinctly different -- with different objectives, different defining rationales and different operating rules and processes. Current doctrine and concepts blur the important distinction this categorization establishes, it assumes that influencing the decisions of adversaries and gaining the confi-

dence and support of local populations fit together. The reasons why this is counterproductive are explained below.

These functions are only similar in that both sets of decision-makers are human beings in complex social ecologies, thus their decisions and behaviors do not follow natural laws as does, for instance, artillery fire. And thus the linear logic of “effects based planning” that applies to some military tasks like artillery fire and logistics does not apply to them.

The Challenge of Affecting Human Decision-making

When I started my “Re-Thinking IO” project in the Fall of 2006, I read all the Army and Joint doctrine then in force, as well as recent professional journal articles, and the report of an alliance wide “workshop” of IO experts held at the Army War College in December 2005 entitled “*Shifting Fires: Information Effects in Counterinsurgency and Stability Operations*.” And I held long conversations with experienced professionals within the field.

From all of this I realized that a very unrealistic “group think” had gained sway. First, the shared mental model of these experts, as articulated in the “*Shifting Fires*” report and elsewhere, was that of a competition “in an increasingly complex and globally connected information environment wherein successful ‘textbook’ tactical actions may risk serious strategic reverses or political ‘blowback.’” In other words, they saw themselves as warriors

hurling, and blocking bolts of “information effects,” metaphorical non-lethal fires, within a new domain of war (as significant as are the land, air and sea domains of war) in which they were conducting “information operations” that in significant ways could not only *compliment* operations in the traditional domains, but could, as the quote indicates, also serve to *replace* old ‘text book’ actions that were referred to as “kinetic” or “lethal” actions.

This IO groupthink also held two prized and related tenets. The first of these is that “the integrated employment of the core capabilities of electronic warfare, computer network operations, psychological operations, military deception, and operations security, in concert with specified supporting and related capabilities” is the best way to gain the maximum benefit of so-called IO core, supporting, and related capabilities.⁵ The other is that when these capabilities are thus integrated, an independent IO “logical line of operations” (LLO) can influence the behaviors of adversaries (and the populations that support them) with so-called “information effects” alone. This line of thinking still prevails among IO professionals.

IO experts believed their work was to generate appropriate messages and to deploy these through broadcasts, leaflets, meetings with local elders and so on, thinking when they had deployed the right message by the right means they had created what they called “information effects.” There was little emphasis on measuring the actual “effectiveness” of volleys of “information effects” and of making adjustments to subsequent volleys. In other words, it was as if, using an artillery metaphor, they concentrated on the work of the

several kinds of “information” firing batteries and paid very little attention to the elaborate feedback mechanism the artillery needs to actually get rounds on target. In 2005 IO was an under resourced and unfocused function with various kinds of “firing batteries” that produced “information based” inputs into the greater “effects based operations” planning and execution monitoring processes of the command. Having a focal point on the staff for all of IO employment ensured that previously ignored or underutilized assets found some sense of coordinated employment, an improvement over the past. But when I asked how anyone knew whether “information effects” inputs contributed to desired outputs, it was like I had asked whether breathing was necessary to life. There was “more hope than method.”

Metaphors can be useful but they also lead astray. For instance the “non-lethal fires” metaphor suggests a linear cause and effect logic. It assumes that “information effects” can independently and reliably cause humans to change their minds. (While few people actually fully believe this, many behave as if they do.) More recently, Marine General James Mattis, as Commander of Joint Forces Command, pointed out the illogic of applying “Effects Based Operations” thinking to situations that are not mechanically closed systems.⁶

Thinking in terms of a domain also promotes the idea of “Information Logical Lines of Operations” in which various kinds of “information effects” combine to cause desired outcomes in enemy and population behaviors independent of other actions of the command. It was more important, according to this way of thinking, to achieve synergy among all kinds of information effects, than it was to create synergy among all the deeds, words,

⁵ Supporting Capabilities include: information assurance, physical security, physical attack, counterintelligence, and combat camera. Related capabilities include: Public Affairs, Defense Support to Public Diplomacy, and Civil-military Operations.

⁶ The downfall of “Effects Based Operations” was the rejection of the notion that human beings can predictably be caused to act a certain way, as in a mechanical closed system causal chain.

and images generated by commands in pursuit of any cluster of mission objectives such as securing the population, defeating or driving off implacable insurgents, pacifying a specific faction or tribe, providing effective governance, and so on. In truth, the metaphor that best fit the prevailing IO/PSYOP logic was that of strategic bombing operations, rather than artillery which never operates independently. Fires and maneuver are usually combined synergistically in tactical combat operations.

The IO way of thinking ignored the reality that the purpose of military action is never purely destructive, as mentioned in the opening sentence of this article, and that the message of deeds trumps those of words every time. It also plays down the difficulty of causing humans to behave a certain way, and does not address the value of experts for deciding how “fact-changing-actions” can speak more clearly and to greater effect. Finally it does not recognize the importance of the coherence of words, deeds and images along each and every mission line of operations. Securing the population, defeating or driving off implacable insurgents, turning the less committed fighters into allies, pacifying a specific faction or tribe, providing effective governance each have their separate influence and inform objects and challenges.

Most savvy military professionals agree that human beings cannot be caused to act a certain way, as in a mechanical closed system causal chain. Otherwise states would require no military to *force* their will on others – to preserve a desired status quo or to change an intolerable one. Thinking that humans can be caused to act a certain way imposes the “goal seeking,” and “cybernetic” earlier systems engineering models of human life that was the downfall of “Effects Based Operations.” People act for reasons, having intentions made up of beliefs and desires. And thus *specific*

human activity is much more difficult to “cause” and remains largely unpredictable.⁷

Humans are products of their genetic inheritance and previous experiences. They perceive the world selectively, making judgments of fact (is this the case?) as well as of value (is it good or bad, acceptable or unacceptable?) about it; they envisage acceptable forms of the many relationships they have to maintain over time; and they act to balance those relationships in line with their judgments.

Moreover, they continually negotiate and renegotiate with others their perceptions and interpretations of the world outside themselves. Human goals are seldom singular, compatible and rational. And from this follows the idea that the course of human affairs within any mission context is as much, and continually, generated and regenerated from inside any system of humans rather than from outside intervention. Therefore it is important to set aside thought models that are too simplistic to be reliable, and look more closely at these twin ever-present dimensional challenges.

The Logic of Influencing the Decisions of Adversaries

Winning the psychological contest with implacable foes, warring factions, and potential adversaries is done by breaking human will, rewarding compliance and mystifying, misleading and surprising. Success requires specifically tailored and closely integrated deeds, words, and images in close combination. Only when actions and communications resonate in harmony do words and images acquire a multiplier effect. Well thought-out actions remain the most convincing way to influence human behavior. Well-chosen, well-

⁷ For the best discussion of this issue see Lieutenant Colonel Tim Challans, U.S. Army, Retired, Ph.D. “Tipping Sacred Cows: Moral Potential Through Operational Art,” in the Military Review, September – October 2009, on page 25.

targeted words and images that build on such foundations can enhance that sphere of influence. Rapid changes in the cyber-electronic dimension raise the bar in this dimension.⁸ “Influencing” desperate and creative people to do what they really don’t want to do requires acute understanding of human behavior and tendencies, and a two armed approach of “mind games” and forcing and rewarding choices. Finding the line of least expectation to the enemy’s greatest vulnerability is central to any course of action and is more than electronic deception. And expertise in human behavior and tendencies is as important to crafting actions that speak clearly as it will be to speak clearly to reinforce military actions. There is ample sound military theory, and new science upon which to base useful paradigms. These must address how the 21st Century environment, and its new means and methods, affect the timeless logic in this dimension of operations. This art and science has to be ingrained in the thinking of all military leaders.

In practice today, deeds, images, and words are insufficiently linked due to segregated staff processes and the insistence of commanders and staff on distinct Inform and Influence lines of operations that often deploy empty threats and illusory rewards in pursuit of overly ambitious ends. Current Joint and Army doctrine tends to understate, and under-rate, the difficulty of influencing desperate and creative people to do what they really don’t want to do. We can never presume to understand the fears of others or what rewards will entice strangers. Moreover, empty threats and illusionary rewards are increasingly difficult to mask in an increasingly transparent world.

Because we can never be sure how opponents will react to words and images, concrete

actions designed to force choices inevitably must follow. Therefore this recommended paradigm encompasses both the art of conveying threats and rewards (PSYOPS) and the art of combining with actions intended to force choices. Helping the adversary understand the inevitability of choice-forcing actions is one proper and powerful function of PSYOPS.

Creating and exploiting a line of least expectation to the enemy’s greatest vulnerability is central to the most economical and decisive path to success. The art of deceiving an adversary (more specifically mystifying, misleading, and surprising), is more than electronic deception, the aspect most emphasized by Joint doctrine. In the modern transparent environment, creating synergy between words and deeds (by harmonizing them) is essential to making the intended impression. Coordinating words and deeds resonates operationally, and understanding human behavior in the face of such synergy is as important as any other action or factor. *PSYOPS expertise is valuable to planning physical actions that convey the most effective message, whether that action is a ruse or is intended to force a choice the enemy wants to avoid.*

Past great captains wove the psychological and the physical together in actions against adversaries. Alexander, for example, always prepared for physical engagements by a thorough reconnaissance and psychological conditioning of his adversary. Genghis Khan and Tamerlane were both adept at following-up operations with psychological exploitation that extended implications to the furthest extent possible. Such intellectual rigor should become the habit of all American commanders at all levels. Adopting a rigorously holistic approach to war will require experts with deep expertise in human psychology to be more available to Corps, Division, and Brigade staffs and engaged exclusively in this dimension of operations.

⁸ Information about events can be shared at great speed and carefully built credibility can be destroyed in moments due to careless coordination of words and deeds.

Army and Joint doctrine are not clear enough about the logic and theory that concerns the ever-present mental contest with implacable adversaries. While the moral dimension of war was well understood by Sun Tzu (writing in, roughly, 500 B.C.E.) and elaborated by military theorists since, we have lost touch with it. The modern literature of human psychology and decision-making is abundant, and this science is rapidly advancing. We only need to add information-age conditions to a holistically woven theory of war.

In highly complex mission environments, winning the psychological contest is the main effort. Excellence in operations depends not only on using force to elicit change, but also on leveraging one's reputation for physical efficiency to influence decisions in the moral domain. Intimidating, demoralizing, mystifying, misleading, and surprising all aim to influence the physical domain. Such a holistic approach to real and potential adversaries was natural to Alexander, Hannibal, Caesar, Napoleon, and the other great captains up through to the 20th century. A holistic approach continues to be essential to success. The less we can bring brute force to bear, the more we need to engage a psychological impact. The more our application of force becomes precise and discriminating, and the more rapidly our capabilities advance, the more artful we need to be in linking deeds, images, and words to leverage a psychological impact.

"Unifying Physical and Psychological Impact During Operations," in the March – April 2009 issue of Military Review further articulates sound and useful theories for influencing the human decision-making of actual or potential adversaries in the modern context.

In sum, the staff leader of the Influence function must become the commander's alter-ego for thinking about the thinking of the command's real and potential adversaries. And therefore this expert can be a valuable

advisor for aligning words and deeds to speak clearly to the adversary in daily tactical operations along every campaign line of operations. He or she will also contribute useful advice on campaign strategy, and the strategy for all campaign lines of effort because this function, to make its best contribution, must learn how to learn about the enemy's thinking in the mission environment.

The Logic of Informing the Decisions of Real and Potential Supporters

Keeping friends at home and gaining allies abroad is a vital dimension of all operations down to battalion level. The business of our profession is to use force to attain political ends when all other means short of force fail. Military Operations are a form of political discourse amidst a larger ongoing, and many sided, political discussion. Military action of any kind injects great drama into the dialogue, thus it is doubly important that military operations speak clearly and coherently to a number of audiences at once. Our adversaries know this and act accordingly. We, too often, behave as if we don't. Public Information is the best term for the science and art of achieving and maintaining favorable relations with publics at home, in allied countries, and in the area of operations. These publics are increasingly the arbiters of success or failure in all military operations. And, military forces have to prove worthy of the great risks these publics are being asked to accept in every case. The challenge of gaining and maintaining the trust and confidence of home and allied publics is becoming increasingly complicated, but it is different from the challenge of gaining the respect, compliance, and support of the publics among which we are "warring" and "pacifying." However, these challenges are so entwined today that absolute unity of effort is required. Actions speak louder than words in both, and neither wants to be propagandized, "influenced," or lied to. Demonstrating competence and military prowess while telling it

straight, simply, and quickly works best. Success requires every word, deed and image to speak with one voice. Credibility is the coin of the realm in this dimension. Speed is essential. And rapid changes in the cyber-electronic dimension will also continue to raise the bar in this dimension.

Public opinion is the arbiter of success in all military operations. In this age, military public information must increasingly become an integral part of operations. When people at home and in allied countries get the impression that their forces are ineffective and illegitimate, they will withdraw support. When people in the battlespace believe our enemy is winning, they will join them just to survive. When they believe our operations are illegitimate and against their interests, they will oppose us.

Before the first physical encounter with an indigenous population occurs, a moral reconnaissance of the human terrain should precede. A focused military public information effort must first identify and assess potential allies and condition first impressions. And as situations unfold, the aim of military public information among the local population should relate a coherent and credible narrative of success, progress, and positive consequences. Given the latent violence of military forces, this problematic work is increasingly essential for success.

Realistically, military forces have to prove worthy of the great risks these local populations are being asked to accept. Because of this, lessons from commercial advertising are not necessarily as directly applicable as some practitioners in the field believe. Soldiers and Marines are not selling a common product. Our approach to winning approbation from the home front populations is overly centralized, too slow, inflexible, and outmoded. It would benefit from a “mission command” approach to de-centralized control. However, winning local allies, and gaining trust and confidence,

is grass roots, bottom-up work, not susceptible to economies of scale. Absolute unity of effort is required for success in military public information because these two related but separate challenges are so entwined today. You cannot say one thing to the media for broadcast back home and another thing to the village elders in the area of operations. Actions communicate better than words in both cases, and neither audience wants to be propagandized and manipulated. Such “influencing” is the common jaded perception resulting from PSYOP. Behaving professionally, and telling it straight, simply, and quickly works best.

Both halves of military public information must contend with people apt to switch between positive and negative attitudes based on changing perceptions. (Humans have difficulty remaining neutral.) The object is to keep the trust and confidence of the people who bear the burden of operations. Whether that burden is indirectly financial and moral, as at home, or a direct physical and moral imposition on those in the conflict, the majority need to be real allies in the fight. Failure is certain if they are not. When any mission aims to depose one government and facilitate the establishment of a new one more to our liking, a radical and much more challenging shift in indigenous attitudes becomes necessary.

Being first with the truth is paramount in achieving such a shift. Minutes and hours matter whether that truth is a notable mission success, a failed enemy initiative, or bad news. The need for alacrity has outdated traditional mechanisms of vertical message control, which must be replaced. In other words, just as “mission command” relies on commanders’ judgments to decide how to implement the intent of higher authorities, their discernment should likewise be trusted to filter and decide what should and could be said in public, as long as it pertains to their mission. Such trust streamlines clearance decisions, keeps spokespersons circumscribed, and is the only control mechanism that has a chance of meeting

the speed required for success. It implies taking and maintaining the initiative to inform. It is the only way to guard the fragile credibility of any command on foreign soil.

The art of gaining and maintaining favorable relations with people in the area of operations also requires an interpersonal alliance with specific communities and their leaders. Such work depends on local social dynamics and cultural knowledge. We are neither organized nor educated for this work. Knowledgeable professionals should perform this work at brigade level and below where commanders have reorganized to perform it with available but undereducated people. Progress depends on accurate feedback of local perceptions, and specific knowledge about relationships, agendas, and interests. Our intelligence services are still primarily oriented toward learning about our adversaries and are ill-equipped for cultural expertise. Learning mechanisms in this dimension are stunted, and improvisation at this level has had mixed results.

This is a dimension where the overt participation of PSYOP detachments or individuals as command spokespersons, even when under a different name, is obviously problematic. Improvisation by untrained leaders in the field has its limits, and this effort increasingly requires more competence at lower and lower levels of command.

Public law permits PSYOP organizations to conduct what I call military public information, as long as it takes place abroad, even when it aims to influence allies in their homelands. Military leaders who are realists understand why this latitude is myopically problematic. PSYOP operates on the principle of “truth-based” messaging. There is a difference between truth and fact. Historically the best propaganda and best deceptions have been based in perceived truths. Realistically, PSYOP should only be directed at adversaries. Oversight of PSYOP messaging at every level

is increasingly necessary to avoid damaging the military public information effort.

Ironically, without the PSYOP capabilities now available to them, commanders would be short-handed in their military public information efforts. These efforts increasingly require more competence at lower and lower levels of command. Applicable career fields need to adapt to new demands and to expand capabilities within a broader, more realistic military public information paradigm. And military public information professionals require deep expertise relevant to span both challenges that comprise this necessarily unified field of competence.

Applicable career fields such as Public Affairs and Information Operations and PSYOP need to adapt to new demands and to expand capabilities within a broader, more realistic paradigm. In fact, there needs to be a Public Information Branch and a Public Information function at levels from Brigade up.

Keeping the trust and confidence of home and allied publics, while gaining the confidence and support of local populations, was crucial in the Peloponnesian War. Such considerations are classical, not new. The major difference today is the speed with which populations acquire information. Adversaries today can misinform, distort events, and prejudice relevant populations if they act quickly. Technology makes gaining public confidence and support far more immediate than ever before. It also used to be possible to think of affecting two separate populations—the home front and those in the battlespace. Such distinctions are no longer practical. “Military public information” is the term that best describes the increasingly important and indivisible art of gaining and maintaining favorable relations with the public at home, in allied countries, and in the area of operations abroad.

“Keeping Friends And Gaining Allies,” in the May – June 2009 issue of *Military Review*, further articulates sound and useful

theories for success in this important dimension of operations.

In sum, just as the staff leader of the Influence function, must become the commander's alter-ego for thinking about the thinking of the command's real and potential adversaries, the leader of this Inform function must become the commander's alter-ego for thinking about the thinking of actual and potential allies in the mission environment. And therefore this expert can also be a valuable advisor for aligning words and deeds to speak clearly to these people. Daily tactical operations along every campaign line of operations must speak with the intended message. He or she will also contribute useful advice toward campaign strategy, and toward the strategy for all campaign lines of effort. And similarly, to make their best contribution, the leaders of this function are charged with the responsibility of learning how to learn about the thinking of actual and potential supporters in the mission environment.

Summarizing the Theory of Informing and Influencing

It is possible to summarize the essential elements of theory regarding Informing and Influencing. People act based on their beliefs and intentions, and these are influenced in multiple and unpredictable ways within the social context of the mission environment. Strangers are **always at a disadvantage** in "inform and influence" contests. A unit's **actions speak louder** than its words. Because of the combined effect of these difficulties, what the units says and does must **send a coherent and consistent message** along every line of mission effort. **Credibility** is the coin of the realm. Success is when the behaviors of key groups of people in the mission environment conform to our desires. Achieving such success will rarely occur in a day or a week, it may take weeks or months of disciplined, and purposeful effort.

Those whose primary task is providing "public information" to keep friends and gain allies for the mission is complex enough without having their credibility tainted by also being involved in efforts to intimidate, or deceive the enemy. And their aims will need to involve them not only in informing the various traditional and emerging media or groups of local opinion leaders, but actually "over watching" the planning of "facts-altering-events" to ensure that "the doing" is in keeping with the intended mission message. Keeping friends is the simpler task because friends are predisposed to support. Gaining allies is difficult because this task implies reversing a predisposition to not support or even to oppose. Both friends and potential allies would rather have their decisions informed than influenced. *And it is better to combine informing both friends and potential allies under one head rather than divide these responsibilities.*

Both friends and potential allies would rather support a winner than a loser. Thus keeping friends and gaining allies is closely tied to the success in the contest of will with implacable foes.

Those whose primary task is influencing the behavior of adversaries, whether to cause them to quit or to be deceived, have a very complex and specialized task as well. Not only is it their task to sell a "truth based" story intended to influence wary and intelligent foreigners by way of various types of communications, but they are also needed to ensure that the actions of force and threat of force taken by the command adequately convey the intentions of either intimidation or deception. *It is better to have one mind span all activities – deeds, words, and images-- intended to influence the behavior of adversaries than to split responsibilities, having some of the staff plan and deploy deeds and others plan and deploy words and images.*

Finally, any campaign will be composed of multiple logical lines of operations, and

every one of these will be comprised of sequential and parallel short duration tactical operations intended to achieve a particular concrete end. Some of the tactical actions belonging to a line of operations will establish new facts on the ground and others will inform potential supporters, while still others will communicate rewards or threats to the enemy. But each line of effort will be a uni-

fied “campaign” in pursuit of one of several goals intended to affect what particular people believe and do within the mission environment. The Inform and Influence expertise on our Corps, Division, and Brigade staffs can make a far greater contribution by integrating their efforts differently than we have.

Part II: “Complex” and “Complicated” Functions Require Different Approaches to Succeed

Neither in practice, nor in doctrine, do we adequately recognize the vital difference between the workings of organic military functions that are based on fixed mechanical laws of nature and those based on unpredictable humans. Today our staffs and their coordinating and integrating procedures still assume that tasks and functions based on a linear logic (such as Fires and Logistics) and those based on a non-linear logic (such as informing and influencing humans) can both use the same staff procedures and planning approaches. In fact, current command and control doctrine rests on the premise that most tactical combat operations can *approximate* a closed system behavior when rapid shock-action by the unit and battlefield isolating actions of adjacent and higher headquarters exclude the influence of external forces.⁹

Functions based on a fixed linear logic within a closed system can bring about concrete results very quickly relative to those that cannot. Their decision, learning and adapta-

tion cycles are short. And there are other important differences that require special measures and processes for functions intent on influencing humans in unbounded and turbulent environments. For instance, their decision, learning, adaptation cycles take much more time because they need to account for complexity. For instance, custom has evolved command posts at corps on down that mix the functions regardless of their basic nature. (As we will learn later, command posts are not currently well organized to deliberately accommodate tactical decision cycles within longer “strategic” decision cycles of mission lines of effort.) The first step in harmonizing these very different kinds of function, is to be clear about what makes them different and why.

Fundamental Differences Rooted in Logic and Purpose

The first kind of function operates according to a linear logic within closed, and usually man-made systems. They can reliably achieve intended outcomes in a very short period of time -- especially when speeded up by modern equipment and automation. Because such functions can assume a fixed linear “closed system” causal logic based on laws of nature they can produce nearly predictable and measurable desired outcomes through one observable tactical action.

⁹ A tactical action or operation is a short duration pursuit of near term concrete ends using appropriate and available means in practical ways according to a rationale deemed suited to the current situation. A campaign is an extended operation in pursuit of broad conceptual aims along multiple lines of effort in a complex and dynamic mission environment in which the rationales for tactical action within the various lines of effort continually need to be updated.

The second kind of function operates according to a non-linear logic in open, dynamic and complex human systems. Complex functions, such as the Inform and Influence sub-functions of the Mission Command Warfighting Function, produce very little measurable headway through one tactical informing or influencing action. It is obviously unwise to assume that Inform and Influence tasks can rely on the regularity of laws of nature. They need to assume a complex and open system in which the core causal logic is constantly changing unpredictably. They make progress only when streams of purposeful, often subtle and disciplined, tactical actions comprise a forward looking and comprehensive campaign of learning and adaptation.

Since none of the modern military functions are simple, let's call the first kind a *complicated function*, performing *complicated tasks* within what we shall call a *complicated system*. The second kind of function we will call *complex*, because it performs *complex tasks* in *complex human systems*. While all functions will need to be harmonized within the over all command and staff process, the differences in the logic of their functioning needs to be taken into account.

For instance the fire support system is a complicated closed manmade system. It is composed of numerous parts and structures, all logically separable from their environment. Such a system behaves in a linear, predictable fashion. This describes anything that operates by a durable causal logic such as a weapon system, a logistical system, a combat engineering system, a sensor grid, an integrated fires network of any kind, or any command and communications network no matter how automated or sophisticated, even the global internet and other manmade infrastructures. And such systems operate on other closed man made systems. For instance, the fire support system is often used to attack and destroy man made defenses, structures or groups of humans that have been spotted and become a real tar-

get. These man-made systems actually exist in the world and can thus be accurately mapped and analyzed. Mapping the structural logic of such systems reveals a predictable causal logic for changing, modifying, defeating or disrupting them. Complicated technical missions and their component tasks (e.g., bombing, artillery fire, electronic warfare, air strikes, and computer network operations) deal with the logic of such closed systems. Uncertainty is more likely to concern unknown or missing facts than unknown or murky causal logic. Learning and adapting will involve uncovering unknown facts, adjusting techniques, and optimizing courses of action within the well-enough understood causal logic of the system. More importantly it is possible to reason backward from desired ends to deduce the necessary ways and means required and how to apply them.

On the other hand, the dynamic relationships of most thinking humans, the key to current mission environments, are extremely complex. Moreover, it is not possible to reason backward from desired ends to deduce the necessary ways and means required and how to apply them.

Influencing Humans in Unbounded and Turbulent Environments Is Complex

Complex systems consist of a large number of interactive parts in which the number of relationships and feedback mechanisms make system behavior unpredictable in magnitude or direction of response. An example would be the action-reaction interplay of the various actors in cooperation and contention in any mission context. Complex systems are also marked by self-organization and "emergence" – the capability to generate system changes without external input. Complex human systems cannot be separated from interaction with their environments. For example, any human system one may want to conceive of such as a tribe, an extended family, a business enterprise, a fraternity, a police force, or the

population of a district, province or country will have relationships with other people in their immediate environment and such relationships may extend far across political boundaries, even to a global diaspora. In other words, actual relationships are hidden, constantly evolving, and impossible to bound. Because of this, linear tactical “ends-ways-and-means” thinking does not apply to rationales for attaining desired ends, and backward planning does not work because fixing planning rationales for the long term is not practical.

To appreciate this, think of the metaphor of an explorer trying to cross a large expanse of unknown terrain long before the days of Google Earth, The Weather Channel, and Global Positioning Systems. The explorer knows that somewhere to the west lies an ocean he wants to reach. He has only a sketch-map of a narrow corridor drawn by a previously unsuccessful explorer. He also knows that highly variable weather and frequent geologic activity can block mountain passes, flood rivers, and dry up desert water sources. He also knows that some native tribes are hostile to all strangers, some are friendly and others are fickle, but that warring among them makes estimating their whereabouts difficult. He also knows that the snows are less likely to be deep in the south, and that some fur trappers have reported an extensive mountain range running north to south. They have also provided vague descriptions of several ways to cross them. Finally, the expedition must head west because turning back can only lead to shame and penury; even perishing in the attempt to cross the wilderness will bring honor; and reaching the ocean will mean certain fame and probable wealth.

While the complex function operator may have a desired system state in mind, and some knowledge about the logic of how to attain it, that logic will need to be adjusted incrementally as the system continues to adapt to the interventions into it and as it responds to the

unknown internal forces and external influence networks hidden to outside observers.

The explorer knows he or she must generally head west, but may have to bear either northwest or southwest, or even due south or due north for short distances. And he or she knows that natives may suddenly be encountered who can either help or hinder the party’s westward progress.

Instead the logic the complex functional operator must follow is one that will exploit the potential for positive change *toward a desired state* within the system as he or she currently understands it. This is choosing a *strategic logic or rationale based on partial clues only*. This strategic understanding is then applied to tactical operations in pursuit of short-term concrete ends that reflect *progress and learning about how to make more progress*.

In other words, the explorer must send scouting parties in various directions at some risk to find the way forward, and at the same time must steadily move the main body of his party and its possessions and supplies of trade goods ever westward. The expedition must divide its manpower and resources between moving camp and learning about the country, and it must react to unforeseen dangers (avoid an ambush along an invitingly easy route) and seize unexpected opportunities his scouts uncover (such as accepting the guidance of a mountain man and his native wife through the foreboding mountain range). These are all tactical choices based on previous and provisional choices of strategic rationale.

The Difference between a Rationale Supplied by Nature and One Imposed by Reason

While keen and diligent observation aided by analysis can lead to *discovering* the inherent workings and causal logic of the complicated system, an understanding of the workings and causal logic of the complex system cannot be “discovered” the same way. This

strategic logic needs to be *inferred* and *imposed* by reason. While mapping the actual systemic relationships of a man-made closed system reveals a real and durable causal logic, the maps or diagrams we might make of complex systems are purely provisional strategic conceptual constructs. These constructs *infer* what is salient based on available knowledge and *impose* a causal structure or rationale based on *best expert judgment* because it is impossible to know all the elements and forces in play. This is necessary because it is also impossible to make a tactical plan and to take tactical action without assuming some *provisional* stand-in rationale.

The explorer, as the expedition advances into the wilderness, begins to piece together the clues the scouts have gathered. The better the guidance to scouts and their scouting, the better the map the explorer can construct of the terrain, and the better the strategic possibilities can be understood. This map will not be as accurate as Google Earth, and it will never be exact, but it will be a sufficient basis for making strategic choices such as: what available routes show more or less promise, which possible interim objectives provide an improved position for moving the main body forward toward the ocean, and what scouting objectives would be most fruitful for learning.

Strategic Rationales for Tactical Actions are only Good for the Short Term

But strategic rationales for tactical actions are only good for the short term until they can be discarded and replaced by knowledge learned as a result of interacting with the complex environmental system. The explorer's journey into the wilderness is also a purposeful journey of learning. In fact, effective explorers are always improving their scouting. And the expedition's maps are constantly in revision.

Because choosing a strategic rationale for the next tactical action is a conscious act of

creation, the responsible leadership must underwrite it. The leader of the exploration takes responsibility for the strategic choices of routes and objectives on his journey. For instance, his scouts may offer up two strategic choices. One river valley heads southwest, and another one goes to the northwest. The southwest branch is tempting because it offers the possibility of less snow, but the northwestern one goes to a junction at which one branch heads toward a possible pass through the mountains. Strategy is about choosing the "best" way forward. The leader must accept the consequences of the strategic choice.

The complicated system function requires no strategic decision about the logic of its functioning in this particular case, because *it functions by the same laws in every case*. It only requires tactical decisions about how to *optimize* its functioning "in this particular case."

On the other hand, *the complex one does require a strategic decision about the logic of its functioning in any particular case*, because it doesn't function by the same laws in every case. The explorer decides whether going northwest or southwest is the "best" strategic choice in this case. Once that decision has been made it also requires tactical decisions about how to optimize its functioning "in this particular case." The explorer then must also decide "the right way" to traverse the chosen path. This is tactics. *Tactics is about reasoning backward from the next concrete tactical end*. In this case it might be the next fork in the valley that requires the next strategic choice about the "best way forward" from there.

The complicated function can reliably plan backward from mission ends to tactical ways and means because the causal logic of its functioning is fixed. It only requires tactical decision-making. The complex function cannot, because the strategic causal logic of its functioning must constantly be evolved by the

operators of the function based on their strategic learning through their tactical actions. It would make no sense for the explorer standing at the edge of the unknown wilderness to plan backward from a particular harbor on the western ocean to the expedition's jumping off point. The explorer has no idea what path will take him across the terrain and what obstacles and opportunities he or she might encounter along the way.

In other words, for a complex function to make headway toward a desired state its operators must impose a rationale for tactical action (a strategy) that "best" exploits the potential for change unique to the situation at the present. The expedition of exploration must *search for a way through* from where it is, having only a general bearing in mind, and without a clear idea of whether the expedition will end up at the mouth of the Columbia, or in San Francisco Bay. A strategic end is conceptual and general; it cannot be a specific or concrete "end-state." It would be foolish to make it so for several reasons. A very specific desirable end may be impossible to achieve, while the route to an acceptable one may be readily at hand after some progress. Or, an even better outcome than could be first imagined may become available by a new route not currently exposed.

Complex function operators must periodically construct a new strategic logic for short-term actions that will allow them to make incremental improvements of position. And how well they do this is dependent on their strategic conceptual mapping skills and on the effectiveness of their scouting and strategic learning. The success of the expedition of explorers is partly dependent on: the thought given to scouting objectives; and the scouting parties' moving unobtrusively across the terrain, spotting relevant clues in the environment, making connections with potential guides to the region, and drawing valuable information from them.

It is also partly dependent on the critical and creative thinking of the expedition leadership who must make strategic and tactical sense of the information the scouts provide. What they must do is less analysis than *synthesis*, and less deduction than *induction*, and especially *abduction*. The latter is generating reasonable hypotheses for testing based on clues of its validity gathered from an unbounded and evolving environment. And they must be skeptical of their own beliefs and biases, especially their belief in the adequacy of previous knowledge about the wilderness they are traversing. And they must be actively hunting for that first clue to falsify their strategic theory rather than seeking comfort in the large number of clues that confirm it. It takes only one new fact that can't be explained by the previous logic to mandate a revision of strategy. For instance, the discovery of some snow at a lower elevation than thought possible at this latitude might not preclude getting to the next tactical objective, the base camp, but it might indicate that a hoped for mountain pass up ahead may be denied. Meanwhile the operators of complicated functions must know and trust in the laws and principles that govern their function and then *deduce* what needs to be done and *analyze* how to optimize the desired outcome.

Complicated Functions Require Only Tactical Feedback, Complex Functions Require Both Strategic and Tactical Feedback

This means that complicated and complex systems functions not only require different thought processes, but also require very different kinds of feedback mechanisms. The complicated function does not require strategic feedback to adjust the fundamental rationale of its functioning. It needs only to measure tactical effectiveness within that rationale. The complex system does require feedback to continually test the provisional strategic rationale of its functioning. In fact, this is essential to its success because conceptual formulas and tem-

plates (such as the “clear, hold, and build” of counter insurgency theory) have to be adapted to the specific case at hand. For instance, assume that *the strategic hypothesis* upon which tactics are based in a particular case is the following: a particular sub-tribe of Pashtun will give up support of the Taliban operating in its home valley when their villages are secure, former sources of livelihood are restored, and certain elders are properly rewarded. Testing this working hypothesis of causal logic is more important than asking whether the practical actions being taken to achieve these ends – securing the villages, etc -- are effective. Achieving these ends may, in this particular case, be irrelevant if the strategic premise is invalid. A valid test of the strategy would require aggressively looking for clues that could invalidate the strategic hypothesis and lead to its revision.

And both complicated and complex functions need prompt tactical feedback to understand the effectiveness of their tactics -- how effectively are ways and means achieving chosen near term ends. The artillery battery needs to adjust the ways and means of firing at a particular target. It needs to optimize the functioning of the system “in this particular case.” In the complex system case of the previous example, (about what would cause a particular sub-tribe of Pashtun to no longer support the Taliban operating in its home valley) not only must this strategic premise be tested but measuring the effectiveness of the tactics being employed to achieve the particular ends also matters -- securing the villages, restoring former sources of livelihood, and awarding the elders. In other words all functions need to optimize the functioning of the tactical systems set up to attain particular concrete tactical ends “in this particular case.” But only complex functions require both strategic and tactical feedback.

As mentioned at the outset of this section, complex functions, such as the Inform and Influence sub-functions of the Mission Com-

mand Warfighting Function, produce very little measurable headway through one tactical informing or influencing action. They make progress only when they can learn not only how effectively their tactics are achieving short term-concrete ends, but also whether the strategic rationale underlying the tactics will advance their strategic aim.

The irony is that complex functions, which have the most difficult feedback requirements, are the least equipped and organized to get it. It is understandable that more mature functions of the complicated kind, like Artillery, Air Defense, and logistics are far better equipped with effective feedback mechanisms. But those of complex processes are yet under developed and need far more attention than they are now getting. There are ways to organize work in Corps, Division, and Brigade Command Posts to get the required feedback.

All Tactical Decision (Learning and Adaptation) Cycles Operate Similarly

All *tactical decision cycles* operate similarly. Here is where complicated and complex functions are similar. The tactical decision cycles of complicated functions, and complex functions both approximate closed system behavior, as well as follow a constant ends-ways-means linear logic. In the complicated case the laws of nature supply the logic, and in the complex case the tactical logic is determined by the previous *strategic* choice as described above – a rationale for tactical action (what short term goals to pursue, and how to pursue them). Moreover, *any* tactical combat operation that approximates closed system behavior (for instance, by applying rapid shock-action locally and by isolating the battlefield from the influence of external forces) follows the decision cycle pattern of Air Force Colonel John Boyd’s famous OODA loop.¹⁰ Con-

¹⁰ Between early 1981 and the end of 1985, during my time at Ft Leavenworth, first as Chief of Doctrine Division of the Department of Tactics, and by June 1982 as the first Director of the School of Advanced

tenders in such tactical situations, according to his thought model, “win” by the quality and speed with which they complete the repetitive cycles of (O) orienting on relevant matters in the mission environment, (O) observing and analyzing what they see, (D) deciding on the best course of action to follow next, and (A) acting decisively while adapting to the learning developed during the previous cycle. This cycle applies to adjusting artillery fire onto a target, successfully engaging a hostile airplane in flight with an air defense missile, securing a village, awarding a tribal elder, conducting a raid, seizing a defended bunker system, etc. The reason this is referred to as a decision cycle and not a learning adaptation cycle has much to do with the context of the 1980’s when the term was coined and the focus of theorists and doctrine writers was combat between the regular forces of a state. It gave rise to incentives to “speed the decision cycles” of commanders by developing “digitized” command systems. In a more theoretical sense this cycle takes place within the parameters outlined above (a defined end, and relevant ways and means). And it is a learning and adaptation cycle within these parameters. It is for optimizing the solution of a defined tactical problem. It is adjusting technique. It is refining or choosing among courses of action within the parameters of a closed system that is assumed to work a certain way. Rather than elaborating further on *tactical* learning and adaptation cycles let us move on to examine the notion of *strategic* learning and adaption cycles.

And All Strategic Decision (Learning and Adaptation) Cycles Operate Similarly

While these don’t apply to functions whose strategic logic is fixed by laws of nature, they

do apply to everything else, and that everything else is quite significant. It includes all military endeavors that cannot assume to approximate a closed mechanical system context operating within a short time window. It includes all contests of force and human will wherein all relevant actors are not known, where all branches of influence networks are not known, where these cannot be bounded, and where unknown internal forces continually create new conditions. It includes any situation that needs to assume a complex and open system in which the core causal logic is constantly changing unpredictably. Simply put, it includes any situation in which being successful in your tactics does not necessarily advance your Cause. Securing the villages, restoring the community’s previous livelihood, and awarding the elders may not cause the Pashtun sub-tribe to abandon support to the Taliban. A *strategic* learning cycle is required as well.

Influencing humans in unbounded and turbulent environments requires learning and operating while campaigning. The next section addresses one way to think about learning and adapting while operating, an important requirement for all functions. The final section after that is about how to integrate the Inform and Influence functions into lines of effort and campaigns, and how to organize seamless learning and adapting while campaigning.

Military Studies, I must have heard Colonel (ret) John Boyd’s four hour briefing more than once a year since I sponsored his visits to Ft. Leavenworth. His decision cycle theory was prominent in the 1982 and 1986 versions of FM 100-5 Operations.

Part III: On Learning and Adapting While Operating

At this point in the discussion it may be profitable to take a different perspective, that of how living organism cope within complex environments, and how one of our allies has adapted doctrine based on this knowledge. Simple organisms also live in an interactively complex world, and, to survive, they have evolved superb coping mechanisms. We can learn much from a team of scientist, led by Dr Anne-Marie Grisogono, who are devoted to teaching Australia's soldiers how "Complex Adaptive Systems," (worms, bee hives, human societies and such) adapt to the dynamic complexity around them.¹¹

All Complex Adaptive Systems Learn at Five Levels

A key premise of their work is that in modern operations the hostile elements, and those supporting them or obstructing friendly forces, will largely be operating below the discrimination thresholds of most surveillance systems. Thus the force expects to have to take action first in order to stimulate reactions from which it can glean some information – which is what simple organisms and other complex adaptive systems do. In other words, standing off at a safe distance and observing will not

work because hostile force elements can simply meld indistinguishably into the normal fabric of local life, and while they may be easily detected by surveillance systems, they are not able to be discriminated from the neutral and supportive population. "Friendly forces will therefore have to take the risks of engaging and interacting in order to learn about the situation, and will have to be prepared to continuously evolve their understanding and their approaches as they learn."

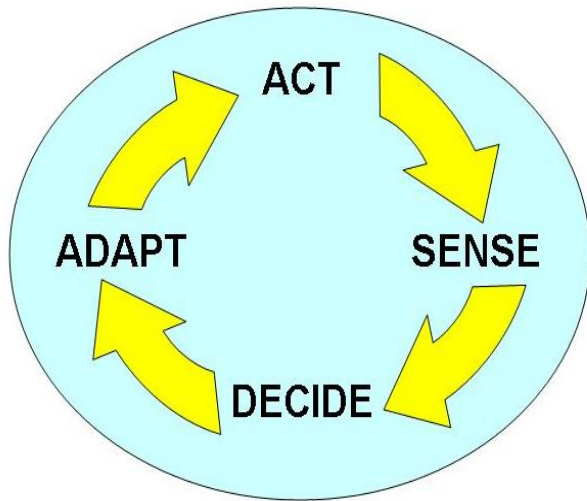
So what did they learn about how complex organisms adapt? "They do this by an iterative process that continually generates and tests variations in a complex adaptive system, and selects and incorporates for retention those that increase its success, and discards and inhibits those that reduce it; leading to a better fit between the system and its context."

Complex adaptive systems (CAS) apply adaptation at five levels, and each successive level adds more power to deal with challenging complexity:

Every time a CAS engages with its environment it *adapts how it acts*. In other words it adjusts technique, acting more appropriately relative to its context. It adjusts or "fine tunes" the parameters that characterise the operation of its ability to sense, process, and act.

Every time a CAS engages with its environment it also *adapts how it learns*. It learns more from its context each time it interacts by expanding its capabilities to sense, process and act in useful ways. It does this by varying and selecting the most fitness-linked parameters that determine the scope of the sense, process, and act capabilities of the system.

¹¹ Dr. Anne-Marie Grisogono of the Australian Department of Defence Science and Technology Organisation and her staff have been exploring the applicability of the science of Complex Adaptive Systems to military operations. She has published a number of papers on the subject including: "Success and failure in adaptation." Interjournal, 2006(1901); The Implications of Complex Adaptive Systems for Command and Control CCRTS, San Diego, 2006; "Co-Adaptation," invited paper 6039-1 Complex Systems Conference, SPIE Symposium on Microelectronics, MEMS and Nanotechnology, Brisbane December 2005. And Dr. Grisogono with Dr. Alex Ryan "Operationalising Adaptive Campaigning" ADAPTING C2 TO THE 21st CENTURY 2007 CCRTS.



Every time a CAS engages with its environment it *adapts how it learns to learn*. By adapting its learning mechanisms it improves the way in which adaptive actions are produced. It varies the parameters that determine the effectiveness of the learning mechanisms and selects those most linked to fitness.

Every time a CAS engages with its environment it *adapts how it defines success*. Defining success is the difficult problem of articulating sufficiently precise and actionable measures of success. It learns to refine increasingly more precise and actionable measures of success by varying internalised selection criteria and selecting those most linked to fitness.

Every time a CAS engages with its environment it *adapts how it 'co-adapts'* with other CAS within a greater system of systems. This co-adaptation of interactions between multiple adaptive mechanisms operates in two distinct ways. "The various CAS within the larger system of systems each introduce variation and fitness-linked selection into the parameters that determine the distribution of roles, resources, authorities and responsibilities between the component systems of a system of interacting CAS. And also because CAS are interacting with other systems that are also adaptive, and they are operating in a more intelligently reactive and adaptive con-

text, their own adaptive actions have to be taken with an understanding of the adaptive mechanisms of the others and they have to have the ability to project action consequences through the lenses of others' perspectives.

Based on this research the Australian Army decided in 2005 that operating in difficult mission environments entails a cycle of acting, sensing, deciding and adapting that turns continually. It is acting based on the best current understanding of the logic of the pertinent causal and influence networks; sensing to discern what changed and why as a result of the previous action; deciding what the sensings mean, how our understanding of the mission situation and the logic of cause and effect have changed; and adapting to the new enhanced understanding of the situation. Adaptations before the next cycle may evolve based on learning at the five levels addressed above.

According to this logic, during the current extended campaigns of brigades, divisions, and higher commands in Iraq and Afghanistan, each command is continually adapting within the ecology of their environments, *as do all living beings*. Success depends on learning and adapting more rapidly *and more appropriately* than rivals in the ecosystem. This dynamic applies the same way to extended operations at lower echelons, and in the performance of complex functions.

Adaptive Action: Paraphrasing the Aussies

The Australians translated Dr. Grigorono's study of natural behavior, and learning at five levels, into "Adaptive Action" principles of doctrine. The following is a paraphrase of the Adaptive Action section in the October 2006 version of ADAPTIVE CAMPAIGNING: THE LAND FORCE RESPONSE TO COMPLEX WARFIGHTING.¹²

¹² See ADAPTIVE CAMPAIGNING: THE LAND FORCE RESPONSE TO COMPLEX WARFIGHTING pages 7 to 10.

“The interplay between multiple diverse actors, all competing for the allegiances and behaviours of societies, creates a complex adaptive system that is constantly evolving, both at the individual and collective level.” The complexities of this system are such that it cannot be understood by remote analysis; rather, situational understanding will only flow from physical interaction with the mission environment and success will only be achieved by learning from this interaction. In response, Land Force action will be characterised by the Adaption Cycle; depicted in the figure above.

“In this construct the Land Force is required to take action in order to stimulate a response by an enemy that is attempting to operate below the Land Force’s discrimination threshold. That response, carefully scrutinised, provides a partial view of the actual tactical situation. As a result of that partial information, the Land Force’s plans or postures are adjusted as necessary before the next action is taken.” Frequent iterations of this cycle enable the Land Force to gradually develop a more complete picture of the tactical situation. “In order to gain and retain the initiative the Land Force must be constantly and rapidly adapting to the emerging situation. This makes complex war a **continuous meeting engagement**. The reality of contemporary and future conflict is that threat groups will continually attempt to adapt their techniques, tactics and procedures faster than their adversary to exploit perceived weaknesses whilst simultaneously attempting to gain allegiances, or at least acquiescence, from societies. Complex war is therefore a competitive learning environment.”

“Adaptive Action describes an alternate approach to land force operations that accounts for the dynamic nature of the complex battle space. Traditionally the land force has conducted deliberate planning with the aim of arriving at a solution prior to interacting with a problem. This approach is based on the be-

lief that the more time spent planning prior to an operation the greater the likelihood of success. Unfortunately, this approach fails to account for the complexities and adaptive nature of the environment. Alternatively, Adaptive Action views deliberate planning as a means to arriving at a start point with appropriate resources and time to allow a solution to be properly developed in contact. In order to embrace this philosophy it is essential that the Land Force, before committing to a course of action, develops and tests its understanding of the interactions that exist between actors and observers involved in the conflict, their respective objectives or goals, and how they are likely to react and adapt over time. Additionally, all levels of the Land Force need to understand what constitutes success at their particular level, how to measure success, and how that success correlates to the measures of success at the operational and strategic levels of the campaign.”

“Adaptive Action is an iterative action that combines the process of discovery (the mission situation is ‘unknowable’ until we prod it) and learning. We learn, therefore we change our behaviour. Therefore Adaptive Action is about doing ‘context appropriate behaviour’. It is manifested within the Adaption Cycle as follows.”

The land force **acts** to stimulate a response. Its actions are characterised as **probing, decisive, and modifying actions**. To test or confirm its understanding of the mission situation the land force conducts **probing actions**. As an example, before committing to an attack on a defensive position small teams may go forward and probe the defences of that position. Having confirmed its understanding of the situation, normally by cycling through at least one iteration of the Adaption Cycle, the land force may elect to conduct **decisive action**. In committing to decisive action the land force acknowledges that further modifications to its course of action are likely based on a better understanding of the mission situation devel-

oped by interacting with it. In response to land force actions actors in the mission environment adapt. As a result, the land force will be required to **modify its actions**, including modifying its ISR collection plans, probing actions and or decisive action.

The land force needs to sense reactions to its various actions, in other words, to **observe and interpret** changes in the mission environment. Consequently the land force needs to *learn to see and measure what is important*. To ensure the land force is able to adapt to change it needs to develop a plan for observing the reactions and adaptations of threat and population groups alike. This plan must include a strategy for refining the plan over time. Equally important as being able to see what is important is the requirement to develop a plan for measuring the effectiveness of land force actions across all lines of operation.

Key to **deciding** when and how to adapt is **to understand what the response means and what should be done**. Having acted to stimulate a response, and sensed the response, the key is to understand what that response means. Having understood what the response means, understanding what should be done is therefore vital. Once we have understood, we can **decide** what is happening and **decide** what should be done.

It is inevitable that as a consequence of land force actions the various actors in the environment will **adapt**. As a result, the land force must be able to accommodate this change and if required, adapt at a quicker rate than its adversaries. Therefore the land force must learn how to learn, know when to change, constantly challenge understanding and perception. **Learning how to learn from each other's successes and failures is important**. Small teams will often discover successful strategies for dealing with a problem that are unknown to other teams. Therefore it is necessary to promote the spread of successful strategies between teams to improve the

overall effectiveness of the force. Often the most important lessons will come from early identification of people's mistakes. Therefore the land force needs to move away from a 'zero defects mentality' in favor of a culture that embraces learning from mistakes. **Knowing when to change is based in knowing what to learn and its relevance to the future**. In particular, what lessons are likely to assist individuals and teams in reacting to or countering adaptation that will occur within the complex operating environment – to threat and population groups alike. Having identified what lessons are important to prepare for the future it is important to identify when to change. To be effective this change needs to permeate throughout the force. **There is a constant need to challenge understanding and perceptions**. Success breeds complacency and the more success individuals or organizations enjoy the less responsive they become to change. In essence, the very thing that we are striving for by adopting an adaptive stance may, if not guarded against, make us less responsive. As a consequence, individuals and the commanders at all level must be encouraged to constantly challenge their understanding and perceptions or they risk being deceived by their foes.

Adapting This to Thinking Humans

While this model of a natural process is very instructive, it also raises some important questions about how to apply this kind of behaviorist logic to thinking human beings who can think consciously about their thinking. The Australians explain Adaptive Action as an adaptation of Col. John Boyd's OODA (observe, orient, decide, act) loop, but it also reflects adaptation of Darwin's theory of evolution to mimetic ideas (rather than genetic natural selection). While learning and adapting is natural and inevitable, it can also be too slow for conditions, thus extinctions occur in nature. Getting relevant feedback in complex situations is challenging, as is learning how

and what to sense and how to identify useful measures of effectiveness.

Understanding the collective logic of colonies of natural organisms, and applying that to organizations of consciously thinking humans in order to enable them to learn and adapt more rapidly and effectively than if nature is allowed to take its course is a noble aim. But it is challenging, to say the least. The question is how can this natural process be speeded up by conscious thinking and avoid evolutionary disaster?

Dr. Grisogono maintains that the challenge of creating adaptivity is that “we have to use adaptation to produce more adaptation.” This is because “the success or failure of adaptive mechanisms depends on a very large number of parameters, and these need to be tuned to each other so that the entire mechanism (or process) functions as a coherent whole. It is unlikely that adaptive mechanisms, whose parameters have been chosen arbitrarily, or even with some design in mind, will result in effective adaptation. In practice, the only way we know of such complex and finely tuned mechanisms to arise is through the process of adaptation itself.” Will the Australian brigades operating in the field adapt the complex and finely tuned mechanisms required to bridge the gap between tactical learning and adaptation and strategic learning and adaptation? Can thinking humans allow natural adaption alone to produce the adaption required? How long could that take, and will their efforts to apply rational design, as they have in the paraphrased text, get in the way? What will it take to create the mechanisms either by design or naturally to attain speedy and reliable fourth and fifth levels of learning and adaptation?

Complex war is a continuous meeting engagement and it is a competitive learning environment. But learning how to optimize within an established tactical rationale and learning how to test and revise that rationale are

altogether different. This methodology of Adaptive Action does not identify that difference; much less provide an approach to address it.

The Aussie’s are right to point out that while planning ahead of action is good, more planning does not compensate for incomplete knowledge, and only learning through action does. However, the notion that a “solution” “be properly developed in contact” is misleading. There are several levels of the “problem.” The idea in the heads of the soldier’s of our earlier example might be that “securing the village” is accomplished by placing a security outpost near the village. At one level it may or may not be the way to secure the village. At another level, securing the village may or may not be a means to remove the Taliban’s influence over the village elders. Perhaps the villagers believe that they cannot depend on the soldiers to stay, and the Taliban will return. Finally, understanding “what constitutes success at their particular level, how to measure success, and how that success correlates to the measures of success at the operational and strategic levels of the campaign” is simple to state as a principle, but is impossible in practice. This would be assuming a complicated, rather than a complex mission environment. Let’s go back to the example of the explorer headed west. When the expedition leaders decide upon a particular near term objective, the measure of success for those in the expedition main body is progress with regard to that objective, and for the scouts the measure of success is to enlighten the choices beyond that objective. Achieving these objectives may or may not lead to finding the best path through the wilderness. The next “probing actions” of the scouts may reveal dead ends, and the need to return to a previous junction and make a different choice there. Thus success in the tactical realm can be over-ruled in the strategic realm when the tactical success only leads to a strategic dead end. The crucial measure of success at that point is, by finding the dead

end, adding to our strategic knowledge by trying out the other strategic options that were previously discarded. Success comes from finding a new way westward that bears more promise. In other words, we must make tactical progress, because only tactical success leads to strategic enlightenment, a position from which to look forward and make another strategic choice. But the choice may well be to move backward, when judged from a tactical perspective, to a former choice point and to try another strategic option.

To say, “the mission situation is “unknown” until we prod it,” implies that we can know it by proper prodding. In truth, we can never know it because it is constantly evolving, due not only to our prodding, but also due to “emergence,” the property of complex systems to change of their own accord. But we probe in order to make better assumptions. To act we have to assume we know it a certain way – we have assumed a rationale for action, and made an assumption of cause and effect logic. We have assumed that achieving certain near term ends are worthwhile, and that we know how to achieve them.

It is easy to see how probing, decisive, and modifying actions operating in the pursuit of tactical objectives can lead to adaptations of techniques and courses of action, but nothing in the paragraph on acting takes you to the art of strategic probing that takes the organization to the higher levels of learning. Probing to answer tactical questions does not naturally lead in the direction of answering questions of strategic logic. It is simple to see and measure what is important to tactics, it is very difficult to observe and interpret what is important to falsifying the strategic rationale upon which the unit is acting.

The key to deciding when and how to adapt is to understand what responses means. But a response may mean you are achieving tactical goals, and the same response may also mean that the strategy is wrong. Unless the response

is noted and judged from both perspectives, the tactical interpretation will win out. Adapting the tactics will not take you west unless you also adapt the strategy. (The fact of snow on the path to the tactical objective may not hamper achieving it. But, as in the previous example, finding snow at this location may affect the value of continuing toward it, when the pass above it is likely blocked.)

Adapting at a quicker rate than adversaries is often key to tactical victories, as Col John Boyd taught, but rushing from one strategic dead end to another is not helpful. Sometimes sensing that the snow mass blocking your way is actually melting, if given some time, is more valuable. And tactical learning does largely depend on learning from each other’s successes and failures, as the Aussie doctrine says, but listening to a minority voice, about why “securing the village” will not lead to removing the Taliban’s power over it, may be more important. Someone must think to ask the strategic questions.

Ascribing meaning and relevance to information leading to tactical decisions about “doing things right” within theories of reality is easily perfected. As long as operators realize that current methods and modes are the product of past lessons learned, they may not be best to gather the most relevant information in the present. Tactical learning and adapting will uncover unknown facts, adjust techniques and expand capabilities to act, sense, decide and learn pertaining to tactics, and thus optimize tactical courses of action to attain set goals. This was the concern of Col John Boyd’s OODA loop. This is about tactical adaptation and tactical learning within a warm and familiar theory of reality. It is natural for humans to cling to the familiar.

The difficulty is gathering information relevant to questions of “doing the right thing”-- are we solving the right problem, and do we have the right strategy? Strategic learning and adapting occurs only when cycles of acting,

sensing, deciding, and adapting will also improve learning about learning; improve definitions of success; and finally improve the capacity to co-adapt with other complex adaptive systems in the environment. This is not inevitable. It is not natural for humans to want to falsify the rationale upon which their tactical efforts have been based. Unless these strategic issues are given equal or greater status with the tactical, only late and unmistakable clues of strategic failure will be noticed in the course of operations.

Moreover, it is not success that breeds complacency. It is conflating tactical with strategic success. Tactics produce concrete outcomes that can be seen, measured, and appreciated with pride – in the present. Strategy does not produce anything but ideas about how to make headway tomorrow. It is easy to lose touch with the strategist in the human brain. The human tendency is to seek confirmation of the rationale that underlies the current activity – the present strategy. It is not possible for normal humans to be neutral about such things. Yet educated humans know that the only thing we can prove with certainty about any proposition regarding any open complex situation is that it is false. We can never prove with certainty that it is true. (Sighting nothing but white swans does not prove the proposition that all swans are white. But seeing even one black one certifies that it is false.)¹³ Systematic falsification of one hypothesis to construct an improvement of it is the workhorse of science. Useful strategic decision, learning and adaptation cycles mimic this process of science.

To avoid conflating tactical with strategic success there has to be, at least, a separation in the operator's mind between understandings

and perceptions pertaining to tactics, and those pertaining to strategic progress. Good commanders often do this naturally. Better yet is to create separate compartments of staff effort operating concurrently. One mind the tactical cycle of acting, sensing, deciding and adapting. The other mind the strategic cycle of acting, sensing, deciding, and adapting. One group optimizes tactics and thinks in terms of tactical learning and adapting. The other thinks in terms of strategic learning and adapting. There has to be an energetic and organized “red teaming” of strategy within the command -- an effort at least as strong as the effort to measure and adjust progress toward tactical ends. This must function aggressively to falsify whatever the reigning strategic rationale might be, and improve it.

Simple organisms do not think, nor do they think about their thinking. They do not favour beliefs and perceptions. And when they redefine success they do not fear that they will be held accountable by higher authorities for being out of step with their higher level strategy. When they find their way through difficulties they survive, when they don't they perish. It is not really a contest of the speed of adaptation, except at the level of tactical techniques and courses of action. It is a contest of who is more fit. It is a matter of the fitness to make two very different kinds of choices requiring two different ways of thinking. And this is the question to which we will need to turn next.

In other words, what we ought to take away from this work of the Australians is that there are four areas of the Art of Command that require clear and critical thinking. The *one* is how to sustain excellence in tactics – tactical acting, sensing, deciding, learning and adapting. The *next* is how to attain excellence in strategy – strategic acting, sensing, deciding, learning and adapting. It is important to establish that the biggest decisions of command are not about how to achieve set goals but what these goals ought to be, what causal logic attains them, and how to learn about these vital

¹³ See Nassim Nicholas Taleb, *The Black Swan*, Random House, 2007. Also the writings of Karl Raimund Popper, especially *Conjectures and Refutations: The Growth of Scientific Knowledge*, London, Routledge, 1992.

questions. The *third* is that while tactics and strategy may occupy different bins in our minds, *the art of campaigning unifies them*. Finally, this work of the Australians highlights an important function of command -- to devote constant attention and forethought to evolving methods and modes of learning appropriate to tactics in novel situations and to

strategic choices in complex ones. Of these *learning how to learn* requires the greatest effort and is the most neglected.

The next section addresses tactical and strategic decision cycles, how they relate, and the art of campaigning to make headway in complex mission environments.

Part IV: The Art of Campaigning to Make Headway in Complex Missions

We are accustomed to thinking of campaigns in terms of military effort on a great scale and long duration. Here I propose one restructured way to think about campaigning, lines of effort within campaigns, and the many short-term tactical actions of which they are comprised. The analogy of the party of exploration that was used to explain complex functions applies to campaigns on the greatest scale down to the smallest. And this is a very useful theory for “campaigning” at various levels of command and on any scale. It is useful toward organizing the staff for greater mission effectiveness, and it is useful for getting the most value added from both complicated and complex functions.

Here I will re-emphasize the difference between missions that require mostly decisions about how to bring about some concrete result demanded of the mission, and those that require satisfying some conceptually described condition, and the kinds of decision-making the latter requires. We will explore the composition of campaigns, and how to organize around the pursuit of the multiple conceptual objectives that inevitably make up the relatively ambiguous campaign mission aim, and all involve affecting the attitudes and behavior of various groups of human beings in the mission environment toward some greater purpose.

Past Corps, Division and Brigade Missions were mostly to Achieve Concrete Outcomes, the New Ones are mostly to Achieve Conceptual Conditions

“Fix Ramadi,” how then Colonel Sean McFarland famously described his brigade’s mission to the press a few years ago in Iraq, may have been spelled out in more words in actual orders, but those two words probably described best the nature of the relatively common mission situation commanders of this generation face.¹⁴ And this mission definitely involved “affecting the attitudes and behavior of various groups of human beings in the mission environment toward some greater purpose.”

The military missions of this century will continue to be novel. And previous experience, borrowed “best practices” of others, and preconceived doctrinal formulas prescribing a fixed set of campaign lines of effort will have value only as references, but will not provide a guiding logic for the mission. A strategy will have to be constructed step by step while campaigning from “bad” to “better.” Strategy is not the answer to “What will

¹⁴ In June 2006 Col Sean MacFarland, the commander of the 1st Brigade of the 1st Armored division, was ordered from Tal Afar in northern Iraq to Ramadi. “I was given very broad guidance,” he said. “Fix Ramadi, but don’t destroy it. Don’t do a Fallujah.” Army Times, 14 May 2007 p. 4, and a full story of the “campaign” at <http://www.armytimes.com/>.

it take to fix Ramadi?” because that is unknowable. A strategy is partly recognizing one or several places to start, and finding a way forward. Partly it is also deciding what conceptual objectives to pursue, and in what pattern, to “Fix Ramadi.” This implies organizing the pursuit of multiple interrelated and ambiguous conceptual objectives, some in sequence and some in parallel, along multiple interdependent lines of effort. And every one of these will in some way affect various groups of people who will need some effective “Informing” and “Influencing.” Strategy is also managing limited resources across these, keeping them mutually supporting rather than conflicting.

Whether adversaries are states or stateless irregulars, or both in combination, current and foreseeable mission complexity stems from three distinct sources: the novelty and ill-defined nature of missions themselves, the complex nature of causal influence networks inherent to the intolerable situations that usually prompt modern missions, and the complex and ill-defined nature of the “team” beyond our own military units that have to be mobilized in common causes to produce effective results in any particular situation.

The mission environment will be comprised of multiple players with different agendas. There will be multiple relationships between the players, and opaqueness and deception will make discerning exactly what the relationships are difficult. The entire mission context will be dynamic: allegiances shift, relationships and networks develop, individual powers and influences wax and wane, local objectives evolve, and natural forces and human activity continually modify the physical systems and environment. This renders the difficult impossible to comprehend in detail. Instead of simple linear causal chains, most events or properties can be ascribed to the result of many preceding interacting causal and influence processes, no one of which can be unambiguously defined as the cause. Similar-

ly, the consequences of any single event or property unfold through many interacting pathways and may have ramifications well beyond the sphere of the single event. Although some particular events may be quite limited in their origins and effects, this is certainly not the usual case, and there is no in-principle cutoff of neither antecedents nor consequents. In other words, these are “open systems.”

As if this were not complexity enough, more is introduced due to the complex and ill-defined nature of the “team” beyond our own military units that have to be mobilized in common causes to produce effective results. Traditional military missions are performed by taskforces over which commanders have full authority with support from elements under common higher-level bosses. But most modern Corps, Division and even Brigade missions require making “common cause” with elements of agencies of other government departments, with units of other sovereign nations outside the command chain, and sometimes also with irregular allies of convenience. Consequently “Our Team” could be just as complex, ill-defined, inscrutable, and dynamic as the mission context of implacable foes, warring factions, and as yet uncommitted groups in the mission environment. Again, deciding who should comprise the team, how to form it, and how to make common cause with it are not tactical decisions, they are decisions of campaign strategy.

However, all this complexity of human origin is neither chaotic, nor predictably patterned -- *it is always possible to make some forecasts with some confidence. And while learning the actual logic of these complex causal and influence networks is impossible, progress depends on imposing a strategic design¹⁵ onto the situation as a basis for plan-*

¹⁵ This is my first use of the term “design” in this article. There are many good and not so good ways to make what I have referred to as strategic choices. The

ning the upcoming tactical actions and sound Campaigning.

What Are Campaigns in Theory and How are They Structured?

Stated briefly, a campaign is an extended operation in pursuit of broad conceptual aims along multiple lines of effort in a complex and dynamic mission environment in which the rationales for tactical action within the various lines of effort continually need to be updated. We need not speak of scale. And, in this theory, a tactical action or operation is a short duration pursuit of near term concrete ends using appropriate and available means in practical ways according to a strategic rationale deemed suited to the current situation.

Historically, “campaigns” have been described much as I have here. In fact, Sun Tzu, writing 2500 years ago explains campaigning in ancient China in this way. Thucydides’s history of the various campaigns in ancient Greece during the Peloponnesian War, describes campaigns in much this way. Likewise the Civil War campaigns of Grant, Lee, and Jackson could be described this way, as could campaigns of the wars of the 20th Century and of the present ones. Broad conceptual aims have served better than specific and concrete ones, because broad ones permit flexibility, and narrow ones lead to disappointment, and inflexibility – often to trying too hard for the impossible, when the possible would have done if chosen sooner, and ending in failure instead. Transforming the outcomes of tactical actions into campaigning progress has always

been a matter of finding the way forward rather than planning backward from a desired end.¹⁶ Invariably achieving campaign aims involved influencing the choices of adversaries, gaining and keeping allies, gaining the acquiescence, if not support, of bystanders, and so on.

At the outset of historical campaigns it was difficult to foresee what course they would follow, or how they would succeed, because the relevant facts and actors changed on both sides. Even though the physical terrain didn’t change, the moral and psychological terrain shifted, outside factors intervened, the opposition behaved unpredictably, intentions went awry, and unintended consequences occurred.

Thus the mission may end but the idea of *end state* makes little sense because states, or situational conditions, change endlessly in a complex situation. While there is always a currently *desired state*, based on what is presently known, commands would be wise to consider these provisional and flexible. It is impossible to know at anytime when the conditions for mission conclusion will be achieved. Complex systems respond nonlinearly, therefore a small injection of the right kind of energy at an opportune time (a systemic tipping point) can bring about disproportionately large changes. Thus the desired conditions could emerge sooner, later, prove overly ambitious, or not ambitious enough. What is actually attainable and desirable inevitably changes as the system of human relationships evolves and more is known.

best I am aware of is to conduct a rigorous “collaborative design enquiry.” Much has been written lately about design. As part of my “Re-Thinking IO” articles for *Military Review* you will find “Systemic Operational Design: Learning and Adapting in Complex Missions” Jan/Feb 2009. This reflects how I understood design in the Fall of 2008. I am constantly learning. My most recent article on design was “The Logic and Method of Collaborative Design” published in the online *Small Wars Journal*. See www.smallwarsjournal.com, March or April 2010.

¹⁶ That doesn’t mean that backward campaign planning hasn’t been tried. It is one thing to look forward to prepare for contingencies, it is quite another to assume that the situation will approximate a closed system with a fixed causal logic (like artillery fire) for the lengthy period of time it will take to accomplish the necessary steps a plan might outline toward the desired end. Those who have tried the latter have been forced to confront frustrated efforts and frequent re-planning at the price of missed opportunities because they became wedded to their plan.

Nonetheless, thinking beings don't go into action without a rationale. Whenever humans act they make a judgment of how the mission world works and act accordingly. Tactical operations of the moment were short decisive actions in pursuit of **near term concrete ends**, using more or less appropriate and available means in seemingly practical ways according to a rationale judged suited to the situation. However, the strategic rationales for tactical actions changed continually when commanders changed their understanding of the situation after initiating tactical operations. As the timeless saying goes: the enemy, the weather, and the comings and goings of allies all invalidate plans, especially as time passes. Unexpected opportunities arise, as well as unanticipated difficulties. The best commanders were better at campaign strategy -- having conditions and the propensities of foes and partners work for them rather than against them thus exploiting the potential for advancing their cause inherent to the situation.

Campaigning has also always been a "continuous meeting engagement in a competitive learning environment." Some have learned better than others. A sound campaigning approach has always been much as described by the Australians -- an iterative process of acting, sensing, deciding what sensings mean, and adapting. To a significant degree, campaigning has always been learning about the mission world and putting that knowledge to immediate use. Making headway in campaigning has always required giving about equal weight to two parallel endeavors: on the one hand, acting to create a concrete new condition or position of advantage and fighting to retain those most useful, while on the other hand acting to develop relevant knowledge. The best have been the most energetic and ingenious in learning how to learn about the way the mission world works. (Ghengis Kahn and Stonewall Jackson come quickly to mind.) And the very best have been adept enough at learning to interpret "what sensings mean" not

only for their tactical choices, but also for their strategic ones. This has always been so.

Campaigning Lines of Effort Also Pursue Conceptual Conditions Pertaining to Humans

Campaigns are naturally long term endeavors in pursuit of a cluster of related conceptual goals that are often in tension, sometimes ambiguous, sometimes sequential, and sometimes parallel, and rarely possible to express as a unity. Organizing the overall effort of a Corps, Division, or Brigade campaign invariably leads to identifying campaigning lines of effort. Such lines of effort are really related "continuous meeting engagements" and campaigns in their own right, composed of related tactical operations, in pursuit of some conceptual aim or condition -- such as "security" of a particular region. And there will be persons and groups of persons to oppose the ends of these sub-campaigns and there will be those to support and benefit from them, and there will be those who will have to be convinced to support them, even though they do not actively oppose. Therefore, every line of effort has need to unify the physical with the psychological impact of its operations, as well as the need to keep supporters supportive and to gain more supporters for it.

All functions contributing to a particular line of effort become integrated as they produce the product of their tactics, including the tactical actions of the Inform and Influence functions, as well as any tactical combat operations. These are the "streams of purposeful, often subtle and disciplined, tactical actions" that comprise a forward looking and comprehensive campaign of learning and adaptation that every line of effort of the overall Corps, Division, or Brigade campaign must become. Campaign lines of effort are thus extended operations in pursuit of broad conceptual aims in a complex and dynamic mission environment in which the rationales for tactical action continually need to be updated.

By the logic presented here, campaign lines of effort are made up of short duration tactical actions or operation in pursuit of near term concrete ends using appropriate and available means in practical ways according to a rationale deemed suited to the current situation. These might be actions taken by complex functions or complicated ones, and they may be combined arms combat operations on any scale, *as long as they meet this criteria*. (When they don't, they must be regarded campaign lines of operations in their own right.) This means that they can *approximate* closed system behavior, especially when rapid shock-action by the unit and battlefield isolating actions of adjacent and higher headquarters exclude the influence of external forces. Whenever the operation can approximate a closed system behavior, then a linear ends-ways-and means rationale can be imposed on what would otherwise be an open complex human system. That means that for the short period this condition is maintained, a rational backward planning process applies. Deciding the "rationale (including the objective) suited to the current situation" is a strategic decision, based on *strategic learning*. Deciding how to act within the rationale to achieve the concrete objective is a tactical decision based on tactical learning. The decision-maker responsible for the line of operation takes responsibility for the logic he or she imposes on the tactical operation. Even when the logic is based on a doctrinal paradigm, it is the leader's responsibility to ensure the rationale applies to the present situation. The decision-maker responsible for the tactical objective decides the tactics.

Within the previous paragraph lies the key to unlocking the dilemma implied by human system complexity -- the impossibility of arriving at a desired campaign end state by applying a preconceived fixed rationale or logic. It is only necessary to have a rationale -- a judgment for how the mission world works -- for the next tactical operation. It is only neces-

sary to pursue one near term concrete condition improving or stepping stone *end* at a time, one that is based on the best judgment of the way to get to the strategic end. And while doing that, it is necessary to send scouts out to vigorously see whether all swans are white. At the sign of the first black swan the tactical rationale for action must change.

Corps, Division, and brigade Campaigns make progress not only when their lines of effort are approaching strategic campaign goals, but when commanders and staff can learn whether the overall strategic logic of the campaign is sound -- are all lines of effort and their objectives still important, do new lines of effort toward new goals need to be undertaken, is the logic of the distribution of effort sound, etc. Campaign lines of effort make progress only when operators and leaders can learn not only how effectively their tactics are achieving short term-concrete ends, but also whether the strategic rationale underlying the tactics will advance their strategic aim.

Moreover, Corps, Division, and Brigade Staff on extended operations in complex mission environments succeed only when they integrate the Inform and Influence functions into the various multi-functional lines of effort of their campaigns, and organize themselves to learn and adapt seamlessly while campaigning. All ongoing operations, whether they are the over all campaign of the command or the component lines of operations of the campaign, need to be thought of as, and managed according to, two related cycles of acting, sensing, deciding, and adapting. In other words, campaigns and their lines of effort are also tactical decision cycles turning within greater strategic decision cycles.

Reorganizing the Staff for Campaigning: Campaign Decision-making, Learning and Adapting along Campaigning Lines of Effort, and Over-all

Corps, Division, and Brigade staffs are today formally organized by functions designed to perform tactical tasks and to manage the tactical decision cycles of the command – as they did during the 100-day campaign of Operation Desert Storm, and in the first few weeks of Operation Iraqi Freedom. There they were in the business of bringing about rapid and concrete changes in the mission situation according to a well-understood rationale that was not likely to change unless the mission changed. This was appropriate in most cases during the cold war, and in a few cases and for brief periods since. While it is true that Corps, Divisions, and Brigades do learn during extended OIF and OEF operations in the manner described earlier by the Australian scientists, the propensity of their staffs, as shaped by the legacies of yesterday, is to occupy themselves with tactical choices and tactical learning and adaptation because staffs and command posts have been deliberately optimized for that purpose. Even staffs at higher echelons spend a great deal of time and effort tracking convoys, shipments, tactical movements of the enemy, and other activities and concrete “measures of effectiveness.”

To be effective in a mission like, “Fix Ramadi, but don’t do a Fallujah” staffs need to adapt to a campaigning mode. This means that decision-making is no longer about the techniques and courses of action for defeating a fairly well understood and clearly defined adversary by employing well-known capabilities according to a familiar causal logic. And now mission objectives are no longer unitary, concrete and unambiguous, they are ambiguous and composed of multiple conceptual objectives. And it is up to commanders to decide what concrete objectives count toward “Fixing Ramadi,” and in what pattern the concrete objectives should be accomplished. And while

the first concrete actions are underway, commanders must already decide what the next ones will be. This is an entirely different set of choices. While every command makes its adjustments to the conditions of extended mission conditions, adaptations need to be more radical and based on an understanding of campaigning dynamics.

Organizing for Learning, Deciding, and Adapting Campaign Level Strategy

Staffs and command posts exist to help make better choices, starting with the most important ones. The senior decision cycle of the command, the one that governs overall campaign strategy, is the one that decides and updates the rationale for the organization by lines of effort, their goals, sequencing, and resource priority. This is the cycle that asks: is our theory of action getting us to “better”? Are the nature, combination and sequencing of our aims the useful ones? Is the overall causal logic bearing fruit? Are we taking advantage of all the potential for moving toward better within the mission environment? Asking and answering such questions should be a regular part of command post business. It should be institutionalized close to the commander, not always demanding his attention but being attended to by someone he trusts to be his full time alter-ego as the keeper of the campaign strategy. When it is not, it will be attended to when campaign strategy failure becomes obvious – after all flexibility has evaporated. The “keepers of the strategy,” and therefore of strategic learning and adapting, will benefit by formal schooling in the conduct of a proper collaborative design enquiry, as they maintain an active enquiry aimed at strategic learning and adapting at the level of the overall campaign. However one arrives at an initial campaign strategy, a hypothesis of causal logic underlies it. It may not be one that is explicitly stated. But it is the set of ideas that answers, “Why are we organized around these objectives and lines of operations, and how do we

think these will get us to the campaign objective?” When the strategy is arrived at by some other method than by a collaborative design enquiry, the “keepers of the strategy” will have to exhume the implied logic and make explicit all the assumptions of causal logic that make up the strategic hypothesis that is carrying the command along its present strategic trajectory, and must *state it plainly*. A plain statement of the principle strategic hypothesis becomes the basis for strategic learning, because attempting to falsify it is the best way to ask useful questions and to design the right kind of probing actions to learn at this level. For campaign wide strategic learning to be possible and reliable, some one must be available to think deeply and clearly about what those hypothesis-falsifying clues could be, to probe for them, to place the right kind of sensors in the right places, and to interpret the meaning of the sensings from the proper strategic perspective.

The staff entity charged with helping the commander with his strategic learning and adapting must have as its primary focus the constant posing of questions and initiation of probes to test, falsify and improve the command’s strategic hypothesis. This is also the part of the staff that helps the commander continually ask, “Are we learning to learn?” As vital as attending to this senior command decision (and learning/adaptation) cycle is, it need not be a personnel or time intensive one when well organized. But this should be a collaborative thought process that periodically involves the commander and at least the principle staff for brief periods of time, as well as the leadership of the several campaigning lines of effort, and the commander’s principle advisor from both the Inform, and the Influence staff functions. The latter is valuable because the overall campaign strategy, every concrete act, every image projected, every word uttered is intended to affect what particular people believe and do within the mission environment. And also because the utility

of these experts is not limited to getting the right words said to the right people, but they can also help the command speak clearly and coherently with the combined force of coherent words and deeds. The commander’s alter-ego for “gaining allies” for the campaign in the mission environment would also provide prime input on the thinking of potential and currently committed supporters. And the commander’s alter-ego for thinking about the thinking of the command’s real and potential adversaries would lend his learned opinion on that key subject as well.

This should be the slowest turning cycle. Strategic choices and strategic adaptation may be weeks apart, but it is important to make them timely – when the first hypothesis falsifying clue appears, and not after there are many. When such decisions are made, they will affect all others decision processes. When subordinate echelons of command are organized similarly, higher echelons will be able to speed their own learning by drawing insights from the strategic learning of their subordinates.

Organizing for Learning, Deciding, and Adapting at the Campaign Line of Effort Level

The next senior decision cycles are the strategic decision cycles of the various campaign lines of operations such as securing the population of specific locales, defeating or driving off implacable insurgents, turning the less committed fighters into allies, pacifying a specific faction or tribe, providing effective governance, etc. Whatever these are, they are the product of the current campaign strategy. When that is revised, some lines of effort might continue, others will end, and new ones may be established.

Organizing along a campaign line of effort is like the familiar concept of task organizing. Someone with an ad hoc staff, or better yet, a subordinate headquarters, is put in charge of,

let's say, "security" in all or part of the command's area of responsibility. Agencies that contribute to accomplishing the objective, at least in the near term, are assigned to the task force. Staff support responsibilities are assigned. And of course, every campaign line of operations requires the support of Inform and Influence staff and operating agencies, because every concrete act, every image projected, every word uttered on the way to achieving "security," or some other campaign line of effort objective such as "peace among factions," "defeat of implacable foes," "transforming hostile fighters into allies," or "better governance," is intended to affect what particular people believe and do within the line of effort environment.

It is as important to organize for strategic learning, decision-making, and adapting along lines of effort, as it is for the overall campaign. This is in all respects a "campaign." It is unusual to see lines of operations treated as such, as is dedicated participation of Inform and Influence support. Lines of effort are usually only the management of tactical operations that loosely fit the defining category of the line of effort, with learning and adapting occurring ad hoc. But a formal process of strategic learning, decision-making, and adapting is vital to every line of effort. How else to impose a rationale over the system of human complexity that needs to be, for instance, "secure," without that rationale being ill fitting like hand-me-down clothing? It is useful to institute a formal process that decides what next set of concrete stepping-stone objectives will lead toward better "security." Experience and doctrine might suggest a range of possible concrete actions that could be taken, and these might be narrowed by the capabilities readily at hand. The narrowed options might be to conduct a census, establish barriers to movement and check points, inform the citizenry of the rules and benefits of such measures, influence hostile elements among the citizens to quit or join the cause, establish

village self-defense platoons, etc. As for the over all campaign, strategic level learning might begin with a collaborative design enquiry. Because "security," and other line of effort goals, are conceptual in nature it is important to ask at the very beginning "Who must be, and feel, secure? (Who is the customer of this product?) And what conditions must be brought about for them to feel secure? Security is a state of mind! (What is the nature of this product?) And what next immediate steps can be taken to improve the present state of "security" from the standpoint of the people we are here to "secure?" (What immediate concrete steps can be taken to improve this product?) Who are supporters (or potential supporters) of the aims of this line of operations, and who are, or could be, implacable foes and irreconcilable adversaries?" Moreover, this is the cycle that also asks, "Is our theory of action along this line of effort getting us to a state of 'better security?' Are the nature, combination and sequencing of our concrete actions the useful ones? Is the overall causal logic of the line of effort bearing fruit? Are we taking advantage of all the potential for moving toward better security within the mission environment?" Asking and answering such questions should be a regular part of business in the command and control of each and every line of operations.

This strategic learning, decision-making, and adapting cycle should be institutionalized close to the commander of the line of effort task force, not always demanding his attention but being attended to by someone he trusts to be his full time alter-ego as the keeper of his or her strategy. The line of effort's "keepers of the strategy," also maintain an active and ongoing enquiry aimed at strategic learning and adapting at the level of the campaign line of effort. However one originally arrives at the hypothesis of causal logic underlying the strategy (the set of ideas that answers "Why will doing what we have done, and are proposing to do, lead to better "security") the "kee-

pers of the strategy” will have to *state it plainly*.

Commanders have to take ownership of their strategic logic. *It won't do to say, "I have to do it this way because this is doctrine," because doctrine is merely a reference and not a regulation. Or to say, "This is a strategic formula my boss has imposed on me," because this is shifting the responsibility for deciding the "right" thing to do to the higher authority in violation of the principle of mission command. In the business of campaigning there is no longevity prize for strategies! There are only penalties for holding on to strategies beyond their time! The authors of strategies don't control the factors that cause them to expire. They only control their creation and their destruction.*

This statement of the principle strategic hypothesis then becomes the basis for strategic learning along the line of effort. Some alter-ego for the line of effort commander must be charged with the responsibility of thinking deeply and clearly about what those strategic hypothesis falsifying clues could be, to probe for them, to place the right kind of sensors into the right places, and to interpret the meaning of the sensings from the proper strategic perspective. When this is a collaborative effort he gets help. And this alter-ego is charged with the responsibility to constantly ask, “Are we learning to learn?”

The collaborative thought process to attend to strategic learning, decision-making, and adapting that periodically involves the commander, and some principle staff and subordinates, for brief periods of time need not be personnel or time intensive when well organized, and when staff and commander become practiced. And this collaborative effort must also include the line of effort commander's principle advisor from both the Inform, and the Influence functions providing support. This is because every concrete act, every image projected, every word uttered along the

line of effort is intended to affect the state of mind of particular people. These experts can help the command speak clearly and coherently with all words and deeds combined. The first of these is responsible to the commander for being knowledgeable about the thinking and state of mind of supporters and potential supporters. The second is likewise responsible for being knowledgeable about the thinking and state of mind of actual and potential adversaries. (If not they, who else? This is knowledge needed to effectively Inform the decisions of supporters or potential supporters among the local populace and or to Influence the decisions of adversaries. The two agencies therefore need to probe and learn about the state of mind and thinking of their separate groups. They should be organized to act (probe), sense, decide what sensing mean, and adapt their learning and knowledge about what they need to know!) Hypothesis falsifying clues leading to new strategic choices and strategic adaptation along lines of operations may also be weeks apart.

Below (or within) the slower turning strategic learning, decision-making, and adapting cycles turns the much more rapid cycle of tactical learning, decisions, and adaptation. The line of effort commander and staff periodically generate plans and orders based on the strategic rationale to assign near term tactical objectives to units, considering their capabilities and resources. It is up to units, representing the various functions called for by the plan, to decide the applicable tactical technique and courses of action. And tactical learning and adaptation is very much a bottom up thing from this point.

Maximizing the “Value Added” of the Inform and Influence Functions

Before we learn about the bottom-up nature of learning and adapting we need to learn how to maximize the “value added” of the Inform and Influence function contributions.

Without any changes to the doctrinally assigned responsibilities of these functions, those in the combined Inform and Influence function (the Public Affairs branch, Functional Area 30 Specialty, and PSYOP) would reach out through the media, other appropriate public fora, and limited face to face leader engagements with their commanders to “inform and influence” the decisions of local citizenry to support *the over-all campaign*. To maintain separation, the PA branch specialists would Inform the media, and Functional Area 30 Specialty, and PSYOP personnel would attend to the rest. Usually the same personnel would publish and distribute messages by various means to Influence the decisions of potential and actual hostiles with regard to *the over-all campaign*. This is not to discredit the intelligence, and diligence with which this is done, but given the complexity of the mission environment, and the difficulty of affecting human decision-making it would be difficult to attribute much to such efforts.

All would agree that achieving the aim of any campaign line of effort is a difficult challenge under the best of circumstances and is much dependent on *successfully* “Informing” the decisions of those who are supporters (or potential supporters) of its aim, and on *successfully* “Influencing” the decisions of those who are, or could be, its implacable foes and irreconcilable adversaries. It may be useful to review the essential elements of theory regarding Informing and Influencing.

Human beliefs and intentions are influenced in multiple and unpredictable ways within the social context of the mission environment. Strangers are always at a disadvantage in “inform and influence” contests. Concrete and visible actions taken along any line of effort will speak louder than the words of any foreign military spokespersons. Because of the combined effect of these difficulties, what the units say and does must send a coherent and consistent message *along every line of mission effort*. Credibility is the coin of the

realm in any attempt to affect human decision-making. And the best chance of being credible is to ensure deeds and words say the same thing. Achieving such success will rarely occur in a day or a week, because credibility accrues slowly, yet can drain away rapidly by mistakes. It may take weeks or months of disciplined and purposeful effort to win over support, or gain respect.

Those whose primary task is providing “public information” to keep friends and gain allies for the mission is complex enough without having their credibility tainted by also being involved in efforts to intimidate, or deceive the enemy. And their aims will need to involve them not only in informing the various traditional and emerging media or groups of local opinion leaders, but actually “over watching” the planning of “facts-altering-events” to ensure that “the doing” is in keeping with the intended mission message. Keeping friends is the simpler task because friends are predisposed to support. Gaining allies is difficult because this task implies reversing a predisposition to not support or even to oppose. Both friends and potential allies would rather have their decisions informed than influenced. *And, and in this transparent world, it is better to combine informing both friends and potential allies under one head rather than divide these responsibilities.* And it would be extremely useful for those responsible for informing the public to be informed of public attitudes about the mission, and of how well what is being done along the line of effort communicates with the public. The head of the Inform function *should be held accountable to provide advice to the commander on how to get public support*, and not only for what should be said.

Both friends and potential allies would rather support a winner than a loser. Thus keeping friends and gaining allies is closely tied to the success in the contest of will with implacable foes.

Those whose primary task is influencing the behavior of adversaries, whether to cause them to quit or to be deceived, have a very complex and specialized task as well. Not only is it their task to sell a “truth based” story intended to influence wary and intelligent foreigners by way of various types of communications, but they are also needed to ensure that the actions of force and threat of force taken by the command adequately convey the intentions of either intimidation or deception. It is better to have one mind span all activities – deeds, words, and images-- intended to influence the behavior of adversaries than to split responsibilities, having some of the staff plan and deploy deeds and others plan and deploy words and images. *Thus the head of the Influence staff should be held accountable for providing advice to the command on the adversary’s perspective regarding everything that is being done along the line of effort, and for advice on how to align deeds, words, and images for best effect from that perspective.*

These are just a few ways that the Inform and Influence expertise on our Corps, Division, and brigade staffs can make a far greater “value added” contribution, chiefly by clearly separating the Informing and Influencing functions, integrating their efforts by line of effort, and by being assigned broader advisory responsibilities.

Above I’ve given a few good reasons for segregating the Informing and Influencing functions, mainly to guard the credibility of those charged with “keeping friends and gaining allies,” and also because it is very necessary to provide the same information in all public forum. There is one more important reason. Because trying to understand the state of mind, attitudes and thinking of either the general public or the hostiles in the mission environment is challenge enough, having to focus on both at once is much less productive. As important as understanding these two perspectives are, it is worth not cutting corners. In fact, the line of effort commander needs an

alter-ego focused primarily on “gaining allies” for the campaign in the mission environment, and for being responsible for providing advice on the thinking of potential and currently committed supporters. The commander also needs an alter-ego for thinking about the thinking of real and potential adversaries to the line of effort goals, and for being responsible for advice on unifying the physical and psychological impact of line of effort operations.

Finally, both the staff’s “chief of public information” and the “chief of influencing hostiles” must follow a campaigning logic for their contributions to the campaigning of their command. Having already participated in the development of strategy for lines of effort, they have a start on their own strategy within that governing strategy. Because the social terrain is in constant flux, they must have a practical rationale for the ends and sequencing of ends for the next concrete short term tactical informing and influencing actions they will take. And they will need a program and rationale for probing the unknowable and changing human terrain.

Their strategy, like others, consists of a two-part hypothesis. The first part is an explicit hypothesis of the way the observed world of influence networks seems to work in their mission world. The second part is a hypothesis for taking advantage of the systemic potential for getting their message across within the relevant system of relationships that they understand. Although all PA, IO and PSYOP act to Inform and Influence specific decision-makers based on some rationale, I have not seen it explicitly articulated during their work. This is important to do, because stating the rationale of the actions we take explicitly and plainly provides the basis for learning and adapting thereafter. A combination of diagramming and narrating is the best method for explicating the strategic hypothesis underlying their work. (A course in design practice would also greatly assist.)

They also have some challenges to overcome before they can learn and adapt.

Tactical Learning and Adaption is Not Automatic

Tactical learning and adaptation is not automatic for all functions, but it should be. In fact, the feedback mechanisms for learning about and adapting new ways to Inform and Influence must be embedded into the feedback mechanisms of learning and adapting needed to achieve the aims of campaign lines of effort.

Only “complicated functions” can probe, sense, decide what they learned, and adapt at the tactical level, and very quickly, because such functions have their own well developed tactical feedback mechanisms. But “complex functions” such as Informing and Influencing do not now have them unless the command creates them. They may be able to get a message to the tactical target audience, but are ill equipped to adjust rounds on target.

Today there is no one on the staff charged specifically with trying to understand the state of mind, attitudes and thinking of either the by-standing public or the hostile elements within the mission environment. Of course this information is important to the commander and the G-3, as are many other things, and therefore these are on the G-2’s list of information demands. And there are scarce intelligence resources for such information. There are a few “Human Terrain Teams” who usually work for the intelligence staff. And there are contract efforts to survey public opinion here and there.

The intelligence function is not specifically tuned to providing Inform and Influence function tactical feedback. One option is to reorganize some assets and ensure that enough staffing exists to permit “battlefield circulation” and staff and unit visits by the Inform and Influence staff. The fact is that all tactical operations along any line of operations are

probes into the complex human ecology of the mission environment and the soldiers who perform these can also be effective sensors if usefully briefed and de-briefed.

By holding the “chief of informing” and the “chief of influencing” accountable for being the principal advisors on matters of the public and hostile perspective, respectively, they have been given the authority to put demands on the intelligence system, and on all “soldiers-as-sensors” in the mission environment, to provide what relevant information they can. In fact, when one considers every tactical action along the line of effort as also a probing action, the potential for “sensing” attitudes and states of mind is already considerable. The issue is cuing, educating the “sensors,” harvesting the sensing, deciding what they mean, and adapting. This is “embedding” the learning mechanisms into the line of operations. And considering the fact that the people the command intends to Inform and Influence, are as much Informed and Influenced by the command’s actions, it would be wise for the command to organize additional activities merely for the purpose of learning about how what is being done and said is perceived. Given these changes and some authority over resources, the inventiveness of soldiers will begin the process of creating the more robust feedback mechanisms these complex functions (and successful over-all campaigning) require.

Neither is Strategic Learning and Adapting

You have to get the tactics right or there is no strategic progress. But you have to get the strategy right enough or the effort of tactics ends up aimless. Strategy is about finding the best way forward, or rather, finding the potential within the situation itself for advancing in the desired direction. Finding this potential requires learning. Strategic learning and adapting is vital, but it is not what Corps, Division, and Brigade Staffs are best organized to do. A functioning and practical system for

strategic learning and adapting has to be imposed.

What We Learned From the Greeks and Still Have to Learn From the Chinese Sages

There are some things that we Westerners learned very well from our ancient Greek teachers, and there are still some things we have to learn from the ancient Chinese Sages.

The Greeks taught Western civilization to think heroically, to create a vision of the future as an idealized “end” one desires, and to overcome any and all obstacles to force that ideal creation of one’s mind onto the real world. In contrast, the foundational discourses of the Confucian and Taoist East do not frame life experience in terms of idealized ends or “visions.” Chinese sages thought it impossible to know what an idealized end could be. They did not trust the mind to have a mirror-like correspondence to external reality. Instead they thought that distinguishing “better” from “worse” was the best one could do. Life experience, in their Eastern perspective, was a perpetual and ever changing flow of events. Intellectual energy, in flowing with the way of the world, should ideally focus on understanding the forces, tendencies, and propensities of the contextual situation. In their understanding, one harmonizes with existence by enhancing the forces tending to flow toward “better” while subtly diverting and blocking those

tending toward “worse.” Although this distinction amounts to oversimplification, the differences drawn are sufficient to point up the differences in the intellectual heritages of East and West.

On their own, both ways of thinking have limitations. But balancing these ways is valuable in a complex world. The Greek way of thinking applies readily to acting within a closed system or tactics. To evolve strategies over a longer term, we need to think the Eastern way. For shorter-term tactical goals we need to work concretely in planning and acting based on a strategy – the best rationale for the way forward-- derived from our best current understanding of the situation. But unlike the Greeks, we should treat our mental strategic construct as a contingency. Westerners often treat goals as conceptual ideals (as immutable realities), and consequently get wedded to expired strategies. The advice of the Chinese sages is to treat strategies and their conceptual goals as provisional landmarks on the road to “better.” Campaigning requires us to be Greeks when it comes to tactics, and Chinese sages when it comes to strategy. And this balancing that goes on in the brains of commanders should also be reflected in the way the commander’s staff organizes its efforts – giving as much attention to the greater strategic decision cycles that bound the turning of smaller tactical decision cycles.

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