Army Intelligence Analysis

Transforming Army Intelligence Analysis Training and Doctrine to Serve the Reasonable Expectations and Needs of Echelons Corps and Below Commanders, Consumers, and Customers

A MONOGRAPH

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With every advance in information processing the delta between the cognitive capabilities of intelligence analysts and the information they collect has widened. In recent history, intelligence operations and training have focused on automated tools and processes, but few efforts have been made to measurably improve the cognitive reasoning abilities of intelligence professionals. Now, when faced with modern adaptive and complex asymmetric threats, the need for human analysis has risen to the forefront, but Army Intelligence is ill equipped to deliver what commanders need at the tactical and operational levels.

The findings of the study are that the term prediction does not adequately address what analysts must do to meet the needs of commanders in the COE. Army intelligence analysis doctrine is outdated and needs immediate revision. No common set of core competencies exists across the analytic disciplines.

The concluding recommendations advance the necessity of better defining in doctrine and training manuals what intelligence analysts need to do to meet the contemporary needs of commanders and intelligence consumers. It suggests immediately revising FM 2-33.4 and adopting an Army tailored model of intelligence analyst core competencies. Several proposals are made to both transform analytic training and to strengthen intelligence sections and professionals.

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Abstract

Transforming Army Intelligence Analysis Training and Doctrine to Serve the Reasonable Expectations and Needs of Echelons Corps and Below Commanders, Consumers, and Customers by MAJOR George E. Lewis III, U.S. Army, 54 pages.

The art and science of military intelligence analysis has been scrutinized for its accuracy and value since the beginning of warfare. With every advance in technology and information processing, the delta between the trained cognitive capabilities of analysts and the data they collect has widened. In recent history, intelligence operations and training have more often than not focused on automated tools and processes, but very few efforts have been made to measurably improve the reasoning abilities of intelligence analysts and leaders. Now, when faced with modern day adaptive and complex asymmetric threats, the need for human analysis has risen to the forefront, but Army Intelligence is ill equipped to deliver what commanders and consumers need at the tactical and operational levels.

In order to effectively answer the question of what core competencies Army intelligence analysts need to meet the contemporary needs of commanders, a survey of doctrinal requirements must first be performed. Amongst doctrine the term predictive intelligence is used frequently to identify what analysts must do to support commanders, but no definition is readily available in the Joint or Army lexicon. Once a definition is established it is applied to the contemporary operating environment from whence an understanding of reasonable commander's needs is separated from unrealistic wants. Thus the purpose and vantage point of this study is cemented and the analysis can proceed. To understand what changes in doctrine and training might be necessary to meet commanders needs, an understanding of the recent evolution of Army analytic training for both enlisted soldiers and officers must be conducted. A crosswalk between doctrine, doctrinal training requirements, and recent training practices is performed to analyze how prediction has been addressed in past training and why it has proven to be inadequate to meet the needs of commanders. The essence and nature of prediction in war is then examined in detail and the analysis leads to the necessity of both redefining practical doctrine and to establishing a core set of competencies for all analytic skill sets in the Army. To aid in doing so, an examination of the larger Intelligence Communities' model for intelligence analysts is conducted and a set of common core competencies is proposed.

The findings of the study are that the term prediction does not adequately or realistically address what analysts in all grades must do to meet the reasonable needs of commanders in the contemporary operating environment. The use of this term in current doctrine is nebulous and a more precise understanding of what commanders need from the Intelligence Battlefield Operating System must be established. Army intelligence analysis doctrine is outdated and needs immediate revision. The never published 2000 version of Draft FM 34-3 is a considerable improvement over previous versions but is still inadequate to institute analytic change in units or training centers. Finally, no comprehensive common set of core competencies exists across the analytic disciplines in Army Intelligence that serves to guide its responsibilities to commanders, training, or links it to practices in the larger National Intelligence Community.

The concluding recommendations advance the necessity of better defining in doctrine and training manuals what intelligence analysts need to do to meet the contemporary needs of commanders and intelligence consumers. It suggests immediately publishing a revised FM 2-33.4, *Intelligence Analysis*, to reflect the skills necessary to forecast adversary and threat actions. Additionally, adopting a Army tailored version of a proposed model of intelligence analyst core competencies is recommended and several proposals are made to both transform analytic training and to strengthen intelligence sections, analysts, and leaders.

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CHAPTER 1 - INTRODUCTION

Commanders and consumers have rightfully scrutinized both the art and science of military intelligence and the profession of intelligence analysts in general for the accuracy of their products since the beginning of warfare. From Sun Tzu and Thucydides through the ages, until warfare's most recent history, "intelligence failures" have been cited as the cause of many a military loss or blunder. More and more consumers have turned to automated technologies and collection systems to provide them with the fidelity and quantity of information they desire. With the advance of technical collection systems and automated analytical tools, commanders and consumers of tactical and operational intelligence have come to expect "information superiority"[1] as the norm. FM 3-0 identifies information superiority as a necessary enabler to "…decisive Army force operations. Information superiority enables Army forces to see first, understand the situation more quickly and accurately, and act faster than their adversaries."[2]

Hollywood and national intelligence capabilities have potentially created unrealistic expectations of the Intelligence Battlefield Operating System (IBOS) within tactical and operational echelons by depicting exaggerated capabilities, in the case of Hollywood, and such unique and sensitive national capabilities that they rarely can serve the timeliness requirements of tactical commanders. Consequentially, commanders have come to not only expect a broad range of predictive intelligence from their intelligence sections, but at times may have based training and operations upon a false expectation of "targetable intelligence" of a fidelity and timeliness that is frequently unattainable with the resources available to them.

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[1] For the purpose of this discussion information superiority is defined in FM 3-0. "Information superiority is the operational advantage derived from the ability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary's ability to do the same." U.S. Army Training and Doctrine Command, FM 3-0, *Operations* (Fort Monroe, VA: GPO, 2001), 11-2. This operational advantage can be viewed as "The degree of dominance in the information domain which permits the conduct of effective operations without effective opposition." U.S. Army Intelligence Center and Fort Huachuca, FM 2-01.3, *Intelligence Preparation of the Battlefield* Draft (Fort Huachuca, Arizona: GPO, 2003), line 9105-9106.

[2] FM 3-0, 1-38.

Intelligence operations and training have more often than not focused on automated tools and processes, but very few efforts have been made to measurably improve the reasoning abilities of junior to mid grade analysts. As an Army at war, the focus has rightfully returned to common tasks and soldier skills within the schools and training centers, but the focus on the critical skills for which an analyst is employed cannot be pushed aside or made secondary, as they have been over the past several decades. Without these core skills, it is pointless to train tactical skills, as the value added does not come close to balancing out the risk every soldier faces on today's warfront. Core analytic skills, abilities, and professional knowledge must remain at the center of the analyst's formal and life-long career path training and education. The Army must improve the training of their analysts in line with that of the national agencies, sister services, and joint expectations to provide the best intelligence possible to their supported commanders and intelligence consumers.

Research Question and Relevance

The basic question addressed in this study is to what standards, or core competencies, should operational and tactical level Army intelligence analysts in echelon below corps (ECB) units be trained in order to meet the reasonable needs of commanders and consumers in terms of predictive intelligence, critical thinking, or intelligence reasoning?" The significance of this question really hinges on the issue of predictive intelligence and what level of abilities, skills, and knowledge the Army are training its analysts to meet the reasonable and real world needs of commanders on the battlefield. This is important as the Army transforms and places greater emphasis on analysis conducted within units of action (UAs) and the division like units of employment (UEx's) directing their operations.

Background

Automation on the battlefield has provided tremendous advantages to senior commanders and their staffs in recent battles and engagements. Operational level commanders and other consumers routinely benefit from information derived from nationally acquired products and

systems. While bandwidth restrictions, or "pipes," have hindered the transfer of information between echelons significantly at times, commanders today have a tremendous advantage over their predecessors in terms of the amount and quality of information available to them to aid in decision-making.

The notions of information dominance and knowledge superiority to facilitate decision superiority have driven the defense industry and Army leaders to invest considerably in technologies to collect, process, and disseminate greater and greater amounts of information. Many of these systems like Blue Force Tracker, All Source Analysis System (ASAS), and Common Ground Stations have provided commanders with levels of fidelity unfathomable in the past or even as recently as Operations Desert Storm and Desert Shield. Exponentially greater amounts of data were collected and fed into the theater of operations for Operation Iraqi Freedom as well. The majority of this information was tailored to report on large conventional type threats.

What was lacking though was the processing power for all of this data. Not only automated, but also human processing power, bounded by the confines of human cognition, was insufficient to produce relevant and timely information for ECB commanders. With every advance in technology and information processing the Army has made, the delta between the trained cognitive capabilities of analysts and the information and data collected has widened. Now, when faced with modern day adaptive and complex asymmetric threats, the need for human analysis or intelligence reasoning has risen to the forefront, but the Army IBOS is ill equipped to deliver what commanders and consumers need at the tactical and operational levels.

Within the Intelligence Battlefield Operating System, leaps in technology and shifts in the type of warfare which belligerents employ has created new problems. For decades the IBOS was challenged to collect information on conventional threats and asked to predict the operations and intentions of them. Collection platforms were designed and optimized to exploit information concerning large formations of armor, mechanized infantry, artillery, and air defense systems.

Department of Defense (DoD) and national systems of numerous national agencies focused on gathering and data-basing detailed knowledge of garrison activities and combat systems during field maneuvers and operations to catalog their activities in order to develop intricate templates for all echelons of units across the full spectrum of their projected operations.

Threat templating and the study of threat weapons, equipment, and operations (WEO) was the central academic and applied studies at the United States Army Intelligence Center & Schools (USAIC&S) located in Fort Devans, Massachusetts and later in Fort Huachuca, Arizona. This school trained entry-level enlisted analysts through basic and advanced course company grade officers, to include warrant officers, on the intricacies of Soviet and Korean styled conventional threats. This detailed knowledge of conventional threat tactics and operations reached its crescendo in Operation Desert Storm and Desert Shield (DS/DS) when accurate collection and templating facilitated a significant maneuver advantage for coalition forces enabling freedom of maneuver and the precision targeting and destruction of Iraqi air and ground forces.

Since DS/DS, the DoD and US Army have faced an ever-increasing array of belligerents and threats that have departed further and further from their strengths both in combat power and training. Haiti, Somalia, Bosnia, Kosovo, and Afghanistan all demonstrated the adaptive asymmetric abilities of belligerents to counter DoD maneuver and firepower strengths by employing WEO in manners that the US Army and DoD were not optimized to address in a dominant manner. Both Army and Joint training and doctrine have increasingly progressed towards a greater reliance on precise "predictive" intelligence in an attempt to counter these emerging threats by equipping the commander with the information advantage he needs to dominate adversaries. Unfortunately, the training to do so has not kept pace with the Contemporary Operating Environment (COE) or the needs of commanders and consumers. To meet the needs of commanders in today's and tomorrow's conflicts, Army intelligence professionals need to understand what the commander wants and then help him define what he

truly needs to make better informed decisions. Once his needs are understood, and once he understands the reasonable limits of intelligence reasoning, The IBOS must alter its intelligence training practices to meet the commander's expectations and needs.

CHAPTER 2 - WHAT DO COMMANDERS WANT?

It is necessary to understand the needs of ECB commanders and other consumers of intelligence before attempting to define the requisite competencies of their analysts. To do this, an understanding of the current Army doctrinal requirements of the Intelligence Battlefield Operating System (IBOS) needs to be made clear. Once doctrine is established, a few examples of recent operations will highlight the analytic activities of ECB intelligence sections and the expectations of their commanders. Finally, a brief summary of the training and doctrinal evolution of Army analytic professions will be presented to understand where the recent state of intelligence training and doctrine rests.

Doctrine

Current and emerging Army doctrine is full of requirements for predictive intelligence. FM 3-0 notes that commanders direct intelligence, surveillance, and reconnaissance (ISR) to "forecast[3]" the likely actions of enemies and adversaries and to "predict threat COAs and environmental effects/activities."[4] Chairman of the Joint Chiefs of Staff, Richard B. Myers, identifies *Decision Superiority[5]* as a desired attribute of the force and a critical capability and

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[3] A distinction between forecast and predict is important. Predict, a term more common to intelligence, yet less precise and I believe inappropriately used, means "to declare or indicate in advance; especially: foretell on the basis of observation, experience, or scientific reason." Foretell is simply "to tell beforehand." But the term forecast "adds the implication of anticipating eventualities and differs from predict in being usually concerned with probabilities rather than certainties." Forecast means "to calculate or predict (some future event or condition) usually as a result of study and analysis of available pertinent data….to indicate as likely [or probable] to occur." Prediction therefore is a dangerous and misleading term for analysts, commanders, and intelligence consumers as it implies certainty rather than probability. "Predict," "Foretell," and "Forecast," Merriam-Webster Online Dictionary, http://www.m-w.com/.
[4] FM 3-0, 11-6, Figure 11-1.
[5] Decision Superiority is defined in the 2004 National Military Strategy of the United States of America as – the process of making decisions better and faster than an adversary. Richard B. Myers, *National Military Strategy of the United States of America 2004; A Strategy for Today, A Vision for Tomorrow* (Washington, DC: 2004), iv.

function. Predictive intelligence is a key element of decision superiority, which is mentioned no less than thirteen times in the 2004 National Military Strategy (NMS). Strengthening intelligence is one of eight capabilities that are part of the transformation focus of the DoD in the 2004 National Defense Strategy (NDS).[6]

Prediction and forecasting are central to the IBOS as defined by current intelligence doctrine. The opening pages of FM 2-0, the Army's keystone manual for military intelligence (MI) doctrine, states clearly and authoritatively that; "one of the most significant contributions that intelligence personnel can accomplish is to accurately predict future enemy events. Although this is an extremely difficult task, predictive intelligence enables commanders and staff to anticipate key enemy events or reactions and develop corresponding plans or counteractions."[7]

According to today's doctrine, predictive intelligence is crucial to operational[8] and tactical[9] level operations. Predictive intelligence serves operational commanders by focusing on intentions and analysis of events within the AO, which indicate where the adversary might stage and conduct campaigns and major operations. The concept of predictive intelligence is truly highlighted though in FM 2-0's discussions about tactical intelligence. "Relevant, accurate, *predictive,* and timely intelligence allows tactical units to achieve an advantage over their adversaries. *Precise* and *predictive* intelligence, on the threat and targets, is essential for mission success."[10]

The concept of prediction is central to the doctrinal application of intelligence at both operational and tactical levels of war, but the nature of prediction at the tactical level is much

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[6] Ibid.

[7] U.S. Army Training and Doctrine Command, FM 2-0, *Intelligence* (Fort Monroe, Virginia: 2004), 1-3.

[8] The operational level of war is defined as the level at which campaigns and major operations are conducted and sustained to accomplish strategic objectives within theaters and AOs. It links the tactical employment of forces to strategic engagements. Source is FM 2-0, 2-1.

[9] The tactical level of war is defined as the level at which units are employed in combat. It includes the ordered arrangement and maneuver of units in relation to each other, the terrain, and the enemy to translate potential combat power into victorious battles and engagements. FM 2-0, *Intelligence*, 2-1.

[10] FM 2-0, 2-4, 5.

more acute and of a higher fidelity and precision than that which is required for operational

commanders. FM 2-0 amplifies this when it categorizes and defines the tasks of tactical

intelligence as:

> Predictive intelligence also enables the staff to better identify or develop enemy
> courses of action (ECOAs). Tactical intelligence –
> - Identifies and assesses the enemies' capabilities, COAs, and
>   vulnerabilities, as well as describes the battle space.
> - Seeks to identify when, where, and in what strength the enemy will
>   conduct tactical level operations.
> - Provides the commander with information on imminent threats to the
>   force including those from terrorists, saboteurs, insurgents, and foreign
>   intelligence collection.
> - Develops and disseminates targeting information and intelligence.[11]

Predictive requirements at the tactical level focus more on individual elements, small

groups, and more diverse units than do those for operational level commanders. Tactical

commanders fight battles and engagements. The variables they must address are of a more

immediate concern, and present a more imminent threat, to their forces engaged in direct combat

than do those confronting operational commanders. The individual and collective elements

which threaten their forces are more numerous and less prone to maneuver collectively as they

might at operational levels of war. For this reason, tactical commanders require greater fidelity to

secure maneuver advantages, create miss-matches, and ensure their dominance of the adversary;

and their analysts are expected to meet these requirements. This is crucial to afford the tactical

commander decision superiority.

Intelligence Sections and Requirements

Fidelity has long been and remains the basic requirement for operational and tactical

level S2s and their intelligence sections. An institutional belief of many intelligence

professionals is that they consider conducting a movement to contact an intelligence failure in

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[11] FM 2-0, 2-5.

that they were unable to produce intelligence of sufficient fidelity for commanders and staffs to conduct focused deliberate attacks against confirmed enemy locations.

Operation Desert Storm offers examples of operational maneuver facilitated by precise knowledge of enemy locations and an accurate prediction of their intentions. The maneuver of XVIII Airborne Corps to the west or right flank of Iraqi defensive formations facilitated by national and tactical reconnaissance and surveillance that was focused by accurate templating exemplifies this type of effort.[12] What is lost though, in this example, is the fact that tactical commanders did not have the precise information they desired, due in part to both communications and intelligence shortfalls, and still conducted what equated to movement to contact operations. It appears that this is to be the norm rather than an exception.

Consider a recent example from Operation Iraqi Freedom. On April 2, 2003, Army LTC Ernest Marcone led the 3-69th Armored Battalion of the Third Infantry Division, with about 1,000 US troops to seize "Objective Peach," a bridge across the Euphrates River, the last natural obstacle before Baghdad. "That night the battalion was surprised by the largest counterattack of the war."[13] The 69th Armor was the main effort, or decisive operation, charged with securing the key bridge that offered a direct approach to what is now Baghdad International Airport. As such, LTC Marcone should have been the priority effort for intelligence support and analysis. He drove towards Objective Peach virtually in the blind oblivious to what forces might engage him or be able to react against him. "The bridge was the most important piece of terrain in the theater, and no one can tell me what is defending it. Not how many troops, what units, what tanks, anything. There is zero information getting to me,"[14] reports LTC Marcone. He did receive one piece of information that suggested an Iraqi brigade was moving south from the airport towards his

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[12] FM 3-0, 11-6, Figure 11-5.
[13] David Talbot, "How Technology Failed in Iraq," *Technology Review*, November 2004, article on line; available from http://www.technologyreview.com/articles/04/11/talbot1104.asp?p=0.
[14] Ibid.

location, but what attacked his unit at 3:00 a.m. on the morning of April 3rd was considerably greater. Approximately 30 tanks, 75 armored personnel carriers, artillery, and roughly 7,500 Iraqi troops attacked his battalion from three directions in coordinated mounted and dismounted assaults; the equivalent of three Iraqi mechanized brigades. The Iraqi deployment was just the kind of conventional, massed forces that is easiest to detect and predict or forecast. Yet, LTC Marcone reports "We got nothing until they slammed into us."[15]

This type of incident exemplifies what commanders need versus want. LTC Marcone could have prepared better if he had some inclination of what faced him and what their likely and probable courses of action might have been. He did not need to know the precise location of every tank or APC, although he surely would have liked to have known that. What he needed to know, in order to exercise both information and decision superiority, was that a mechanized force of an approximate size was closing on him from the north, with supporting artillery, along with an approximation of their rate of travel, weapon systems, and probable avenues of approach and actions so he could properly array his forces. Simply stated an assessment of their capabilities, limitations, and probable actions. This is information that did not need to be broadcast or pushed down to his advancing forces. Instead in the worst case, this information based on known locations of Iraqi forces prior to his LD could have been forecast by the IBOS to better prepare his staff for possible counterattacks and likely sequels and branches to his plan. Long standing training from USAIC&S should have provided his S2 section (and his divisions) with the necessary skills they needed to project just such a threat scenario or COA.

Other and more recent developments in Iraq, along with events over the past decade in places like Somalia and Haiti, better exemplify the problems facing the IBOS. The difficult to predict nature of insurgents and terrorists creates a more complex problem for the IBOS and a

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[15] Ibid.

different set of skills for analysts to master. OBJ Peach presented aspects of classic Soviet style threat attack scenarios involving armored and infantry assaults supported by artillery.

Dealing with more numerous dispersed, less doctrinal, and more unconventional threats is something the IBOS and the larger Intelligence Community are ill prepared to deal with. This is highlighted by the analysis offered from *On Point* when its authors conclude that "estimating the intentions and tracking discrete Iraqi military units proved difficult, and paramilitary units proved nearly impossible to track and even harder to assess in terms of intentions."[16] The result of such ambiguity is that most tactical commanders claimed that they made every assault as a movement to contact.[17] MG Marks, the CJFLCC J2, summed up the inability of the analytic effort when he suggested that no one anticipated or estimated the intentions of the paramilitaries accurately. "We did not predict that (the paramilitaries) were going to come out of the cities and expose themselves to armored vehicles and armored formations without similar protection."[18]

Analysts today are experiencing what has been described in literature and film as the Red Queen syndrome or hypothesis. They are seeing an evolutionary arms race in complex dynamic social systems and belligerent structures. Mitchell Waldrop describes this phenomenon in a passage from his book *Complexity*:

> An "evolutionary arms race ... is where a plant, say, evolves ever tougher surfaces and ever more noxious chemical repellents to fend off hungry insects, even as the insects are evolving ever stronger jaws and ever more sophisticated chemical resistance mechanisms to press the attack. Also known as the Red Queen hypothesis, in honor of the Lewis Carroll character who told Alice that she had to run as fast as she could to stay in the same place, the evolutionary arms race seems to be a major impetus for ever-increasing complexity and specialization in the natural world – just as the real arms race was an impetus for ever more complex and specialized weaponry during the Cold War."[19]

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[16] Gregory Fontenot, E. J. Degan, and David Thon, *On Point; The United States Army in Operation Iraqi Freedom* (Fort Leavenworth, KS: Combat Studies Institute Press 2004), 422.

[17] Ibid., 423.

[18] Ibid., 422.

[19] Mitchell A. Waldrop, *Complexity; The Emerging Science at the Edge of Order and Chaos* (New York: Simon & Schuster, 1992), 261.

What then can be done to identify asymmetric and unconventional threat intentions and actions? Must the Army accept the fact that most tactical assaults will be made as movements to contact or can more be done to forecast the nature and mannerisms of adversary actions? While ambiguity is likely to remain an element of combat indefinitely, what is being done to address recent shortfalls that have come to light in the wake of combat operations over the past decade?

Analyst Training

This need to improve and update analyst training and doctrine was first acted upon somewhere between 1995 and 1998 when USAIC&S initiated a short lived effort to convert from training Soviet threat WEO to a more holistic and less regimented approach. In 1998 the 306th MI Battalion at Fort Huachuca, charged with training the then Military Intelligence Officer Advanced Course (MIOAC now MICCC or MI Captains Career Course), initiated a curriculum change to include a block of instruction titled the Fundamentals of Analysis, Synthesis, and Threat (FAST). This course sought to train company grade analysts destined to serve as battalion and brigade S2s on how to think versus the previous threat templating system of what to think. This system utilized case studies and a Gestalt like adult experiential learning model to explore the concepts of intelligence analysis and synthesis.

From this point on, the term synthesis superseded or was used in conjunction with the more often used term analysis. The difference is fundamental to the shift from templated threats that could be divined from the location of major weapon systems and C2 nodes to more vague and ambiguous threats found in less conventional adversaries.

Analysis, according to the FAST block, was simply processing information to separate it into its constituent parts for individual study.[20] This involved breaking apart what was known or observed and evaluating its individual significance. The FAST course, along with the basic

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[20] USAIC&S Student Text for MIOAC AY 1998-1999, "Fundamentals of Analysis, Synthesis and Threat" Note Guide & Case Study (Fort Huachuca, AZ: 1999).

analyst course for MOS 96B 10's and other analytical courses within USAIC&S, introduced the term synthesis to their vernacular. Synthesis was used to determine meaning and move towards prediction. Synthesis was defined as the fusion of separate elements or substances to form a whole or to sum all analyzed information into a coherent whole.[21] The process of analysis and synthesis was indented to then lead an analyst towards prediction.

Prediction, which is not defined in Joint, DoD, or Army doctrine, was defined in the FAST block as "determining future enemy action by assembling all synthesized information into a coherent whole."[22] Predictive intelligence was therefore categorized as a specific type of intelligence separate from descriptive or explanatory intelligence. For the purposes of this paper, predictive intelligence is intelligence that attempts to estimate, determine intent, forecast and or speculations about the likely COAs of an adversary for a given set of circumstances and or time period.

Since these initial attempts initiated around 2000, the language and doctrine of the IBOS has attempted to incorporate the concepts of synthesis and prediction into their lexicon. In 2000, an initial draft of FM 34-3, *Intelligence Analysis*, was produced. The introduction admirably noted that:

> There is an evolution in intelligence support that recognizes the need to go beyond simply reporting facts. The addition of the word "synthesis" in the title of this manual represents this evolution. Synthesis is the process of deriving meaning from facts. The intelligence analysis and synthesis process provides the framework for intelligence analysts to support the full range of military operations of offense, defense, stability and support. Only with proper understanding of the analysis and synthesis process will intelligence analysts have the ability to provide relevant and timely intelligence support to their commanders.[23]

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[21] Ibid.

[22] Ibid.

[23] US Army Intelligence Center and Fort Huachuca, FM 34-3, *Intelligence Analysis* Draft (Fort Monroe, VA: US Army Training and Doctrine Command, 2000), iii.

Unfortunately, no recent attempt at publishing this manual has made it to the force since the last released document dated 15 March 1990. The manual was scheduled for revision in FY 2001 and again in FY 2006 but to date FM 34-3 has not been revised, nor has it been released under the new naming convention as FM 2-33.4.

Draft FM 34-3 traversed a great distance to move from cold war like templating solutions to synthesis-based prediction. The document accurately charted a comparison of Cold War and Post Cold War analytic challenges (figure 1).

Draft 34-3 correctly identifies the problems that analysts face in today's complex environment and specifically addresses predictive analysis.

> Predictive analysis is a process allowing the intelligence analyst to predict future events. Predictive analysis in not guessing but is based on solid analysis using the appropriate tools and methodologies. It is a key component in the IPB process, situation development, and indications and warnings (I&W). Predictive analysis can be both difficult and risky. Predictive analysis is often focused on determining a threat's capabilities, intent, vulnerabilities, and most probable COA. It requires the analyst to stretch his intellectual resources to the limit and understand that the predicted event or COA can hinge on many variables.[24]

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[24] FM 34-3, 4-10.

Analysis Mission / Cold War	Analysis Mission / Post-Cold War
Well defined threat	Poorly defined threat
Understood OB (Order of Battle)	Little or no OB data
Emphasis on war fighting	Emphasis can focus on any element of offense, defense, stability, and support and two or more of these elements may exist within a give situation.
End-state is support to targeting	End-state dependant on many variables

Figure 1. Analysis Mission Comparison

This instance is the only source of information in the DoD lexicon that attempts to define predictive analysis. Predictive intelligence is thus defined as the combination of analysis, adjunct information, and synthesis to forecast or predict the outcome or intent of adversaries' actions under a given set of conditions. This definition is not widely accepted nor is it used in any other Joint or DoD publication as it only served as a working definition in a draft publication that was never finalized or broadly circulated. The January 2000 Initial Draft of FM 34-3 is an excellent source document and does seem to have influenced analytic training.

In November of 2003, a manual was released which addressed the skill level 1 through 5 tasks for enlisted intelligence analysts. STP 34-96B15-SM-TG, *Soldier's Manual and Trainer's Guide for the Intelligence Analyst MOS 96B Skill Level 1, 2, 3, 4, and 5* serves as the primary MOS reference to support the self-development and training of every 96B soldier.[25] This document lists the qualitative skills that enlisted intelligence analysts must possess at various levels to be proficient in their duties. While this document does not limit what an analyst might

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[25] U.S. Army Training and Doctrine Command, STP 34-96B15-SM-TG, *Soldier's Manual and Trainer's Guide for the Intelligence Analyst MOS 96B Skill Level 1, 2, 3, 4, and 5* (Fort Monroe, Virginia, 2003).

do in the performance of his duties, it does list minimum requirements. The STP also identifies what tasks are to be trained in formal schooling and those tasks that are to be developed at assigned units. The document reinforces the requirement to predict in numerous areas and identifies that Advanced Individual Training (AIT) and the Basic Noncommissioned Officer Course BNCOC are responsible for training and certifying soldiers in these tasks. Some of the tasks that involve prediction are:

> 301-96B-1106: Develop Initial Course(s) of action (Paragraph 4 of the Intelligence Estimate). The performance step in this tasks notes that prediction may not be completely accurate.

> 301-96B-3103: Develop the Intelligence Estimate. Performance step 6 c. and d. require prediction and analysis.

Similar critical task lists (CTLs) for field and company grade intelligence officers were published in January of 2004[26] and May of 2003[27] respectively. These task lists attempted to address the need for officers to lead intelligence operations, but failed to quantify or qualify the critical skills of conducting analysis and leading analytic efforts. In all of these documents, there is an erroneously great leap that is made from using tools to support intelligence production and being able to perform and analysis on information to understand and predict or forecast intentions. The intelligence cycle is addressed to serve as the system by which intelligence is produced to support the MDMP and commander's needs, but critical tasks such as perform analysis and predict or forecast probable threat courses of action (COAs) are not adequately defined, ignored, or overlooked completely.

The Draft FM 34-3 and 96B STP, coupled with FM 2-0 and FM 3-0 all identify the need for predictive intelligence. Training programs within the intelligence center should not only train, but should certify that soldiers, both enlisted and officers, meet the requirements the doctrine

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[26] United States Army Intelligence Center & School, "Critical Task List; 35D – All Source Intelligence Officer; Field Grade Levels – Major" (Fort Huachuca, AZ: 2004).
[27] United States Army Intelligence Center & School, "Critical Task List; 35D – All Source Intelligence Officer; Skill Level 2 & 3" (Fort Huachuca, AZ: 2003).

places on them to provide predictive intelligence to their commanders and other consumers. With this need for predictive intelligence clearly articulated in doctrine, and knowing that commanders require some form of prediction to achieve information superiority and decision superiority, it is now necessary to examine what both the broader Intelligence Community and the social sciences believe is cognitively possible for analysts to achieve in terms of predictive intelligence.

CHAPTER 3 - WHAT IS POSSIBLE?

Now that there is an understanding of what commanders and consumers need, a framework which describes the doctrinal and practical analytic requirements at the tactical and operational levels of war has been established, and given the working definition for predictive intelligence, it is now important to look at what is cognitively possible for analysts to achieve so realistic expectations can be defined. To do this it is important to understand what the intelligence profession at large understands about the cognitive and psychological aspects of intelligence analysis.

The Fallacy of Prediction

Prediction is a difficult subject for social scientists, psychologists, and intelligence professionals to address. Many claim prediction is impossible as does Alan Beyerchen when he describes the non-linear and chaotic nature of social systems--"when an infinitely small variation in the present state may bring about a finite difference in the state of the system in a finite time, the condition of the system is said to be unstable. It is manifest that the existence of unstable conditions renders impossible the prediction of future events, if our knowledge of the present state is only approximate and not accurate."[28] This belief accurately describes all complex and unstable social systems such as an insurgent element in Iraq or elsewhere.

The point is true for accurate and precise prediction such as where exactly insurgents will defend from, or when and where, in what numbers, and from which directions will ambushes be

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[28] Alan D. Beyerchen, Clausewitz, Nonlinearity, and the Unpredictability of War, *International Security* 17, no. 3 (Winter 1992/93): 64.

established in conjunction with improvised explosive devices (IEDs). Without knowing every

initial condition of every actor, coupled with every additional stimulation, it is impossible to

predict with any accuracy how an individual or small group will act. Prediction of this type is

ludicrous and futile and commanders who expect such fidelity need to understand the statistical

and practical improbabilities of asking for such an estimate.

This type of prediction can be proved unobtainable by the growing science known as

chaos theory. "Chaos" results when a system is nonlinear and "sensitive to initial conditions."[29]

In other words, a nonlinear system, such as a complex social system or a group of people,

perform chaotically or unpredictably because any slight variation in their interactions that are

unknown or obscure to an observer from their initial interaction, or at any point throughout their

interaction, creates exponential variances at temporal point in the future. This cannot be simply

approached by developing a branch for every possible variable. Multiple branches that

dynamically interact with each other based on observable and hidden or unobservable variables

must be considered. The outcomes are endless, but they can be categorized or framed within the

physical limits or capabilities of their environment. Let us turn to Clausewitz for a better

understanding of this ageless problem.

Book 2 of Clausewitz' grand work *On War* concludes that: "in War, the will is directed at

an animate object that reacts."[30] A Military action produces not a single reaction, but dynamic

interactions and anticipations that pose a fundamental problem for any theory. Such patterns can

be theorized only in qualitative and general terms, not in the specific detail needed for prediction.

"The second attribute of military action is that it must expect positive reactions, and the process

of interaction that results. Here we are not concerned with the problem of calculating such

reactions--that is really part of the already mentioned problem of calculating psychological

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[29] Beyerchen, 65.

[30] Clausewitz, Carl Von, *On War* (New York: Alfred A. Knopf, 1993), 149.

factors--but rather with the fact that the very nature of interaction is bound to make it unpredictable." Clausewitz thus understood an essential feature of non linearity and applied its consequences in his understanding of war: "The core cause of analytical unpredictability in war is the very nature of interaction itself."[31]

Many readers of Clausewitz's *On War* ". . . have sensed that it [and he] grapples with war's complexity more realistically than perhaps any other work."[32] Bererchen presents a compelling argument that Clausewitz's deeper understanding of the nonlinear nature of complex warfare alters "its character" in such a way that "it cannot be analytically predicted."[33] He suggests a radical departure from accepted interpretations of Clausewitz's thinking by arguing that ". . . in a profoundly confusing way, he understands that seeking exact analytical solutions does not fit the non-linear reality of the problems posed by war, and hence that our ability to predict the course and outcome of any given conflict is severely limited."[34] While it is generally accepted that Clausewitz is primarily addressing the complex issues associated with planning and executing operations, it is not at all incorrect to apply his statements to intelligence operations and both the science and art of intelligence analysis and reasoning.

Chance Renders Prediction Impossible

Clausewitz describes chance as the factor that denies us the ability to predict with any accuracy the outcome of future events. He suggests that ". . . guesswork and luck come to play a great part in war" because of chance and that the ". . . objective nature of war makes it a matter of assessing probabilities" instead of being able to predict with any accuracy.[35] This brings to light the nature of the very issue of prediction, and what is expected of the intelligence analyst. Probabilities are therefore what many believe are possible. Although no relevant mathematical

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[31] Beyerchen, 73.
[32] Beyerchen, 60.
[33] Ibid., 61.
[34] Ibid.
[35] Clausewitz, 96.

weighting can be given to these probabilities for neither the initial or exactingly precise state of any one factor can be known nor can the multitude of factors dynamically interacting exponentially be observed, recorded, and calculated. Once again Clausewitz summarizes this thought when he argues that ". . . absolute, so-called mathematical factors never find a firm basis in military calculations. From the very start there is an interplay of possibilities, probabilities, good luck, and bad that weaves its way through the length and breadth of the tapestry [of war]"[36].

Considering the lowest level of tactical analysis, the maneuver battalion S2 section, the depth and breadth of what is required of a junior intelligence officer and his/her section is rarely understood. Many, and quite possibly most, battalion commanders expect their S2 to be able to comprehend and assess more information about the enemy than does the commander's entire staff knows about its own unit. A battalion staff, comprised of a field grade S3 with several company grade officers and mid-grade NCOs, company grade S1 and S4 with similar staffs, and a field grade executive officer are challenged at times to report the status of their subordinate units in terms of location, combat strength, weapon system status, composition, and pending actions (or intentions). When a commander wants to know something about a subordinate company's intentions, he or a battle captain calls down and asks, or if Blue Force Tracker enabled, he checks his Commander's Tactical Terminal (CTT) and gets the information. S2s simply do not have this luxury.

Commanders and S3's have asked for and expected this very type and fidelity of information from their S2's. Compared to their battalion staff, the S2--a junior captain or possibly lieutenant who may or may not have had some experience as an assistant S2, or possibly someone from the MI transition course who branch transferred recently, or a MI officer with no experience in the tactical realm--neither whom have had any analytical training in either MIOBC or MICCC, has relatively little experience in his profession. These officers are expected to track,

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[36] Clausewitz, 97.

know, and anticipate (or predict) as much, if not more, about an adversary force and all its

branches than an entire experienced and motivated staff and Lieutenant Colonel commander

might know about itself at any one time.

Probability is the term that more accurately describes what commanders and consumers of

intelligence need. Prediction is less and less sought after in many social sciences today, but when

it is in such fields as comparative politics, which seek many of the same results as does

intelligence analysis, prediction tends to be made in probabilistic terms.[37]

Probability

Students of intelligence, analysts, consumers, and commanders must see war as

Clausewitz likely understood it. He possessed "a mind realistically willing to abandon the search

for simplicity and analytical certainty where they are not obtainable. The use of this image

displays an intuitive grasp of dynamic processes that can be isolated neither from their context

nor from chance, and are thus characterized by inherent complexities and probabilities."[38]

Both commanders and analysts, like Clausewitz, "ought to be insightful enough to cope

with nonlinearities. They ought to display a deep and abiding concern for unpredictability and

complexity and consequentially to search for ways to express the importance of such matters as

context, interaction, effects disproportionate to their causes, sensitivity to initial conditions, time-

dependent evolutionary processes, and the serious limitations of linear analysis."[39]

Analysts can be trained to identify patterns though and the ability to do so is considered a

necessary trait. Collin Gray notes several important observations when he argues that "Albeit

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[37] Todd Landman, *Issues and Methods in comparative politics: An Introduction* (Routledge, London, 2003), 10.
[38] Beyerchen, 71.
[39] Beyerchen, 72.

subject to change over time, belligerents will show more or less persisting patterns of relative strength and relative weakness across dimensions."[40]

On predictive theories, he quotes MacGregor Knox "Patterns do emerge from the past, and their study permits educated guesses about the range of potential outcomes. But the future is not an object of knowledge; no increase in processing power will make the owl of history a daytime bird. Similar causes do not always produce similar effects, and causes interact in ways unforeseeable even by the historically sophisticated. Words still, individuals with their ambitions, vanities and quirks--make strategy." But remarks "Knox is correct, but only up to a point. As a historian he points rightly to the vanity of predictive theory."[41]

Beyerchen eloquently and comprehensively equates Clausewitz's observations about war with the characteristics of nonlinearity. He notes that Clausewitz arrives at a conclusion about prediction when he states "that the theoretical basis for prediction of the courses of war dissolves from analytical certainties to numerical probabilities"[42] He does not claim that Clausewitz foresaw today's Chaos Theory, "but that he perceived and articulated the nature of war as an energy consuming phenomenon involving competing and interactive factors, attention to which reveals a messy mix of order and unpredictability."[43] Probability is thus what can be achieved by analysts--not precise prediction.

For these reasons argued, the term prediction, with all of its connotations of certainty and precision, should be stricken from the lexicon and vernacular of the military arts and sciences. The term forecast should replace it in doctrine, education, training, and application as it deals with probabilistic assessments based on study and the analysis of pertinent data to attempt in

[40] Collin S. Gray, *Strategy for Chaos; Revolutions in Military Affairs and the Evidence of History* (London, UK: Frank Cass Publishers, 2002), 124.
[41] Gray, 131.
[42] Beyerchen, 67.
[43] Beyerchen, 70.

order to indicate what is likely to occur. Maxwell Clark notes that "But here we have passed

form sameness to likeness, from absolute accuracy to a more or less rough approximation."[44]

Summary

Secretary of State Colin L. Powell, a man highly regarded and respected for his rational

nature and thoughtfulness, summarized his thoughts about intelligence analysis as a career

military commander and statesman when he testified to the Senate Governmental Affairs

Committee on 13 September 2004.

> An old rule that I've used with my intelligence officers over the years,
> whether in the military or now in the State Department, goes like this: *Tell me*
> *what you know. Tell me what you don't know.* And then, based on what you
> really know and what you don't know, *tell me what you think is most likely to*
> *happen.* And there's an extension of that rule with my intelligence officers: I
> will hold you accountable for what you tell me is a fact; and I will hold you
> accountable for what you tell me is not going to happen because you have the
> facts on that, or you don't know what's going to happen, or you know what your
> body of ignorance is and you told me what that is.
> Now, when you tell me what's most likely to happen, then I, as the
> policy maker, have to make a judgment as to whether I act on that, and I won't
> hold you accountable for it because that is a judgment; and judgments of this
> kind are made by policy makers, not by intelligence experts.
> And I think this has been a rule that's been very useful to me over the
> years, and it allows my intelligence organizations to feel free to give me the facts,
> but also free to give me the most likely occurrence, knowing that I bear
> responsibility for making decisions on the basis of that middle range of
> information on what is most likely to happen.[45]

Commanders at all echelons should heed the experience of Secretary Powell. He

qualifies this simple statement about asking his intelligence officers to assess probability, or what

the most likely occurrence will be when he identifies what he needs from his intelligence sections

in terms of expertise.

> . . . They require real expertise, close attention and careful analysis of all-
> source information. To be helpful to me and my colleagues . . the Intelligence

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[44] James Clark Maxwell, "Science and Free Will," in Lewis Campbell and William Garnett, with a new preface and appendix by Robert H. Kargon, The Life of James Clark Maxwell (1882) (New York: Johnson Reprint Corporation, 1969), 440-442.

[45] Colin L. Powell, Opening Remarks by Secretary of State Colin L. Powell Before the Senate Governmental Affairs Committee, U. S. Department of State, Office of the Spokesman, Washington, DC, 13 September 2004.

Community must provide insights and value added to the information we already collect…When the Intelligence Community weighs in with less than this level of expertise, it is a distraction rather than an asset. …I'm not well served, nor are they, by collectors and analysts who do not understand my unique needs, or who attempt to provide a one-size-fits-all assessment.[46]

Secretary Powell clearly identifies what he, as a former military commander, wants and needs from his intelligence analysts. He does not need a loosely founded prediction or guess. What he needs and expects is a professionally competent and insightful statement of the facts coupled with a probabilistic assessment of what is most likely to occur, tailored to the consumer, and based on expertise in the given area. With this in mind, it is now necessary to look at the current state of the intelligence profession to identify what is expected of intelligence professionals outside of the Army.

Clausewitz "interaction," "friction," and "chance" ought to be in the vernacular of every analyst, and he should understand their dynamic impact on war as a nonlinear chaotic system. The importance of developing and promoting intuition and judgment, via experience, is captured in an obscure and seldom referenced section of chapter three of book eight of On War.

". . . Intellectual activity leaves the field of the exact sciences of logic and mathematics. It then becomes an art in the broadest meaning of the term--the faculty of using judgment to detect the most important and decisive elements in the vast array of facts and situations. Undoubtedly this power of judgment consists to a greater or lesser degree in the intuitive comparison of all the factors and attendant circumstances; what is remote and secondary is at once dismissed while the most pressing and important points are identified with greater speed than could be done by strictly logical deduction."[47]

This passage identifies the role of intuition and its ability to leap past logical calculations to make more holistic and more rapid assessments. He identifies the difficulty and essentially impossible task of considering every possible observable facet of a situation. He argues that "to assess these things in all their ramifications and diversity is clearly a colossal task. Rapid and correct appraisal of them clearly calls for the intuition of a genius; to master all this complex

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[46] Ibid.
[47] Clausewitz, 708.

mass by sheer methodical examination is obviously impossible."[48] Clausewitz undoubtedly

understood the importance of recruiting, training, and advancing the most capable analysts, as

well as the role of bias in their assessments when he notes that; "We must recognize that the

conclusion reached can be no more wholly objective than any other in war, but will be shaped by

the qualities of mind and character of the men making decision. . . ."[49]

Since prediction is practically and statistically impossible to achieve--What is it that

commanders need? The answer is decision superiority! To understand degrees better than their

adversary and to make better-informed decisions to achieve the affects they desire.

To take this analogy further, consider what a professional football team staff seeks to

know about an opponent. They have detailed scouting reports with the entire history of both

coaches and players from the opposing side. They have films available to them of every game the

opposition has played. They exist in a linear, well-defined, environment where the rules and

physics of the game are clearly understood and cannot be deviated from. With all of this--

prediction is impossible! No one team knows what the other will do throughout the game or even

on the very next play. A professional staff cannot predict what formation will be used next, how

the play will unfold, or the sequence of the game plan. Even with numerous imaging platforms

focused on the field, and with SIGINT and HUMINT assets focused against their opponent, the

best they can hope for is to mitigate risk by orienting against probable and possible COAs or to

influence their opponent through action.

Chess is perhaps an even simpler, two dimensional game, with fewer variables and an

even more rigidly defined set of rules and physical limitations. Yet no one doubts the distinction

between chess grand masters and the associated skills they need to consistently win in matches.

Masters do not predict, they forecast based on years of study, and an intuitive sense that allows

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[48] Ibid.
[49] Ibid.

them to recognize patterns and options to determine, or forecast, the probable intentions and course of action of their opponent. This gives them decision superiority and postures them for success. Mitchell Waldrop in *Complexity* reminds us though that "war is not chess; one's opponent is not always playing by the same rules, and is often, in the effort to win, attempting to change what rules there are."[50]

"Prediction isn't the essence of science. The essence is comprehension and explanation."[51] A analysts must be developed who understand the Red Queen hypothesis. This is akin to how the English biologist, Richard Dawkins, described his observations of how plants continuously adapt to the adaptations of the insects that feast on them as a spiral type evolution where change and adaptation are met with the same. This phenomenon is recognized in warfare as an evolutionary arms race. This "race seems to be a major impetuous for ever increasing complexity and specialization in the natural world--just as the real arms race was an impetuous for ever more complex and specialized weaponry during the Cold War."[52] What it takes to develop analysts who can forecast intuitively the probable actions of adversaries with some degree of accuracy and professional competence is a daunting task and is the topic of the next chapter.

CHAPTER 4 - WHAT IS CURRENTLY BEING TAUGHT WITHIN THE INTELLIGENCE COMMUNITY AT LARGE?

The Current State of the Analytic Profession

The larger Intelligence Community is comprised of the National Security Agency (NSA), Central Intelligence Agency (CIA), Defense Intelligence Agency (DIA), Federal Bureau of Investigation (FBI), and Department of Homeland Defense (DHS) to name a few. These agencies take a different approach to selecting and training intelligence analysts than does DoD and the Army.

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[50] Beyerchen, 75.
[51] Waldrop, 255.
[52] Ibid., 261.

Much of this is a result of the recruiting process for the military, as opposed to the professional recruiting process of the members of the Intelligence Community (IC). This paper does not attempt to address the organizational and structural constraints and problems of DoD, but instead attempts to address the nature of the problem and possible solutions to them. Therefore, the method and pool of potential recruits is not intended to be a topic for discussion. Instead, let us look at what makes up an analyst in these organizations and what qualifies them to be such. Having established what the needs of commanders are in chapter 1 and 2, what has been taught in the past which has not met the current needs of commanders in chapter 2, and what cognitive limitations exist and should be expected of their analysts and analytic or intelligence sections in chapter 3, it is now appropriate to examine what analysts are being recruited for and trained to do in the larger IC. From this analysis a basic model of analytic skills will be proposed and then compared to the current requirements for Army analysts.

Core Competencies Model for Intelligence Analysts

This paper does not seek to examine and modify the adult learning model employed at USAIC&S, so an educational model will not be used to compare alternatives or lay out possible course of action to improve the analytic capabilities of analysts. Instead, let us first look at the skills required to perform intelligence analysis. The skill sets that will be identified should be considered basic and uniform skill sets across the broad spectrum of analyst positions in the IC. Excluded from these skills are those that are unique to the service specific military analyst. In the case of Army analysts, these unique skills would be the soldier tasks or common tasks that allow the Army analyst to perform his analytic duties in combat and in support of military organizations and operations. The analytic skills required for job performance are extracted from a study of the National Security Agency (NSA) but should be considered generally accepted by the national IC, to include law enforcement, and DoD. Dr. Russell G. Swenson, the Director of the Center for Strategic Intelligence Research at the Joint Military Intelligence College, confirms this in an introduction to the book *Bringing Intelligence About: Practitioners Reflect on Best Practices*

when he states ". . . the principles of intelligence collection and analysis addressed in this book will apply to intelligence creation in the broadly overlapping cultures of law enforcement and national security intelligence."[53] Dr. Swenson reinforces the value of the NSA model that will be discussed when he argues that:

> Available literature does not yet address the question of what knowledge, skills and abilities are required, from the point of view of front-line managers, to support and sustain the evolution of intelligence tradecraft. David Moore and Lisa Krizan define a graduate set of criteria to calibrate an individual's suitability for an analytic position. Given the current Intelligence Community hiring surge, the set of core competencies they define for the NSA also provide a guide for the larger Intelligence Community to improve the professional stature of its workforce by defining who the analysts of the present and future ought to be."[54]

Figure 2. Functional Core competencies

[53] Russell G. Swenson, ed., *Bringing Intelligence About; Practitioners Reflect on Best Practices*. (Washington, DC: U. S. Government Printing Office, 2003), 1.

[54] Swenson, 4.

Moore and Krizan's model (figure 2) identify four functional core competencies for intelligence analysts. These four broad categories are characteristics, abilities, skills, and knowledge. A fifth category for military analysts would clearly be those skills previously discussed called common soldier tasks or general military skills. These skills are currently being incorporated into Training and Doctrine Command's (TRADOC) training centers and schools and are not the topic of this study.

Personal Characteristics of Intelligence Analysts

The first category of the NSA model characteristics describes the individual traits that are most prevalent in successful intelligence analysts and are, therefore, most desirable in analyst candidates (figure 3). Traits such as insatiable curiosity, self-motivation, voracious reading habits, one who questions conventions, and one who is able to concentrate intensely fall into the core competency category of characteristics. These characteristics should be identified in the recruiting process and might be used as screening criteria by commissioning sources and branching boards for officers, by warrant officer selection boards, and by both Initial Entry Training and Advanced Individual Training (IET/AIT) cadres, to screen, and if necessary, disqualify potential recruits for Army intelligence analysis profession disciplines. According to Moore and Krizan, "self-motivation and insatiable curiosity" are the most indispensable characteristics of successful intelligence analysts.[55] This paper will not address recruiting and assessing efforts, but TRADOC, USAIC&S, and the Army DCSINT should examine recruiting and assessment processes to ensure intelligence transformation efforts acquire applicants with the most potential for success in intelligence analysis disciplines.
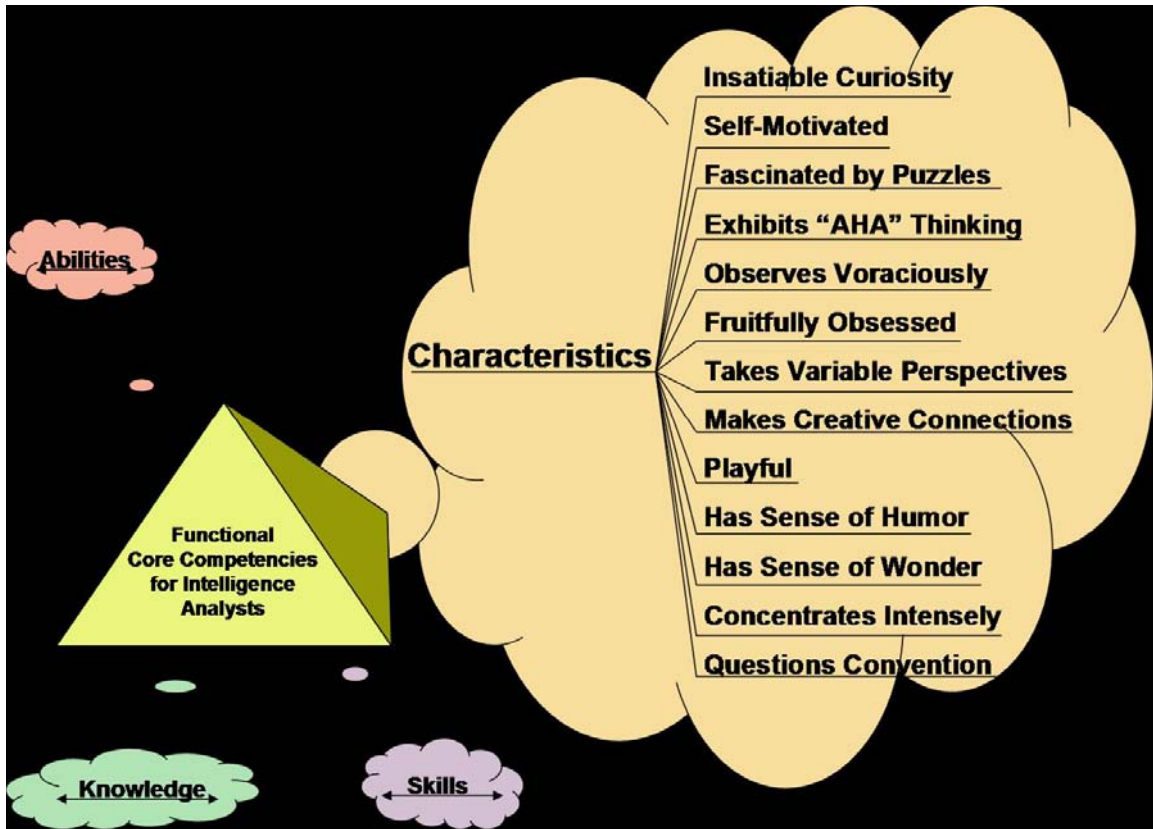
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[55] Swenson, 105.

Figure 3. Characteristics

These personal characteristics of analysts are very important but are only one aspect of creating

and developing a core of professional analysts. These characteristics might be enhanced and

nurtured by successful learning organizations and schooling, but they cannot be created. What

can be created and certified through rigorous and structured professional schooling are the three

remaining areas of the NSA's model; abilities, skills, and knowledge. Abilities and skills

"provide the tools for performing good intelligence analysis. Knowledge provides raw materials

for analysis as well as for an appreciation of the context and relevance of information."[56]

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[56] Swenson, 106.

Abilities of Intelligence Analysts

Abilities are the bridge between the skills and knowledge of an analyst and his or her personal traits or characteristics previously mentioned. The abilities shown in figure 4 arise from aptitudes that mature from these personal characteristics and are then enhanced through analyst specific training. Abilities are, therefore, the first core function that can be enhanced, developed, and honed to serve the needs of the intelligence analyst professions by structured training and evaluation.
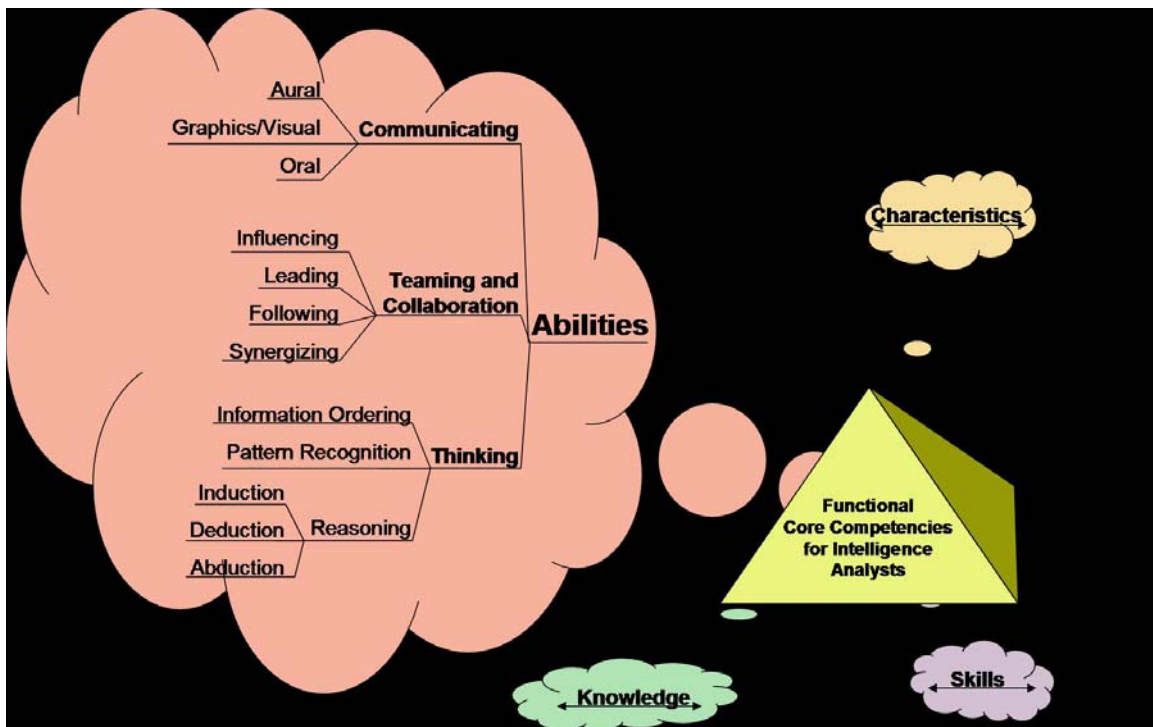

Figure 4. Abilities

In the NSA model, abilities are broken down into three broad categories: communicating, teaming and collaboration, and thinking. These three abilities categories, with their subordinate attributes, are abilities that can and should be common to all intelligence analysis activities and analysts. They should be trained and assessed constantly from IET through graduate levels of training and execution. None of these abilities are any less or any more important than the others as the intelligence analyst will fail if they are seriously deficient in any of these abilities. Of the

three, thinking is crucial to synergizing the other two abilities. Intelligence analysis is a thinking person's game that struggles to adapt to conformist military structure and organizations. Commands who adopt a learning organization structure and climate will significantly improve the environment in which quality analysis thrives. Thinking is what separates analysts from the automation tools they employ to aid them in processing information. "The personal characteristics of intelligence analysts are manifested in behaviors that reflect thinking and or the inherent drive to think. Our national survival may depend on having better developed thinking abilities than our opponents" correctly argues Moore and Krizan.[57]

Skills of Intelligence Analysts

Skills are the first truly learned abilities that separate analysts from other professions. The eight analytic skills depicted in figure 5 are the building blocks for success in the analytic intelligence professions and are an excellent measure to gauge the effectiveness of any training program. As previously stated, the larger national Intelligence Community accepts these skills as fundamental and critical to success. Skills "represent learned expertise or proficiency based on a particular ability or set of abilities"[58] and are essential to perform successful intelligence analysis.

Of the eight skills, critical thinking is pivotal to the profession of analysis, as it is to many academic professions. "It is by thinking that the analyst transforms information into intelligence"[59] and it is clear, particularly for Army analysts who are not currently recruited from analytic professions, that intelligence analysts must be trained to think critically. Critical thinking can be defined as:

> [An] intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synergizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or

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[57] Swenson, 109.
[58] Ibid., 113.
[59] Ibid.

communication, as a guide to belief and action….Thinking about [our] thinking while [we're] thinking in order to make [our] thinking better.[60]
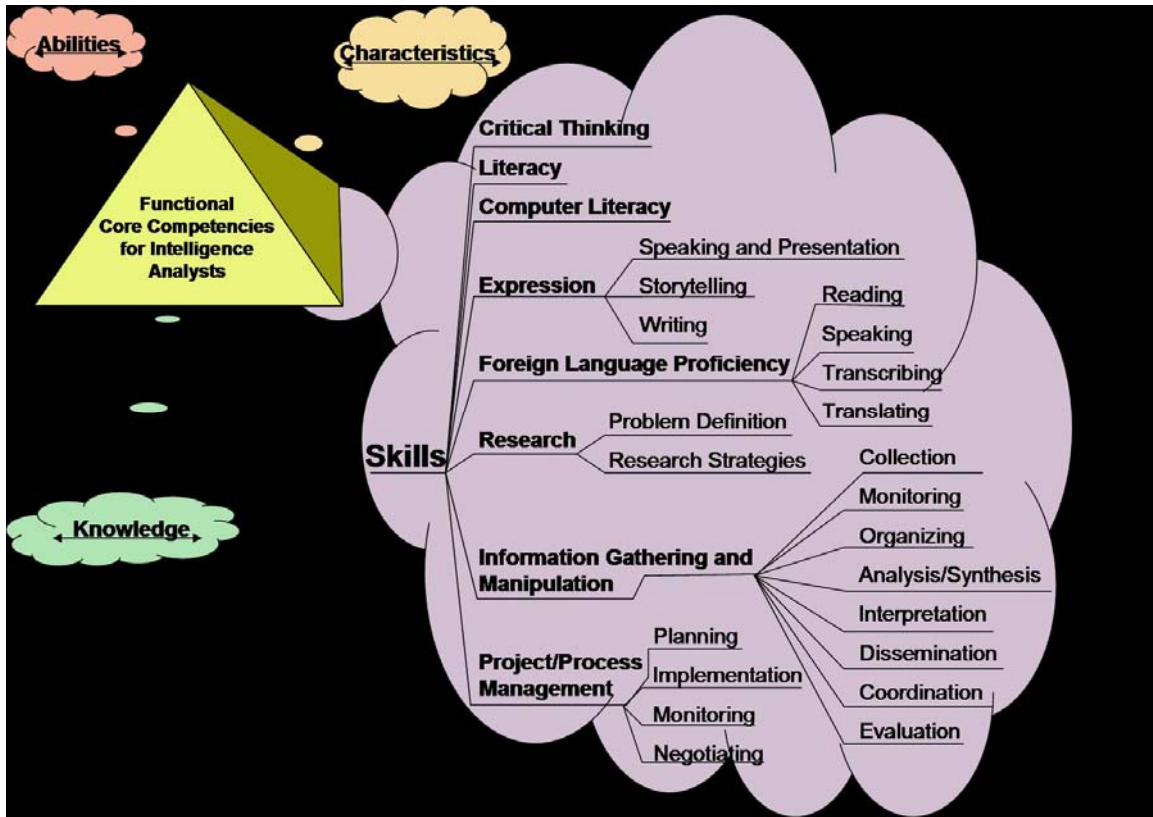

Figure 5. Skills

Short of a lack of information, failures in thinking are perhaps the number one reason behind intelligence failures. Failures or the inability to recognize bias, understand cultural deviations, and ignoring alternative premises are only a few of the traps that an intelligence analyst can fall prey to if he/she cannot think critically. Of the eight critical skills within the core competencies of intelligence analysts, critical thinking is the most crucial and is often the least trained. Foreign language training, research, and information gathering and manipulation are also very important skills. These skills are often overlooked in analyst programs, where a disproportionately heavy emphasis is placed on automation training. Computer literacy is one of

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[60] National Drug Intelligence Center, *Basic Intelligence Analysis Course*, #9, PowerPoint Presentation, April 2001.

the eight necessary skills, but it should not carry more weight or receive more emphasis than the other skills.

Knowledge for Intelligence Analysts

The required knowledge for intelligence analysis is perhaps the most overlooked or ignored aspect of ECB intelligence analysis. Increased reliance on outsourced or collaborative sources has left the ECB analyst with little or no expertise. Doctors Garst and Gross of the DIA's Joint Military Intelligence College (JMIC) speak to the root of this problem when they say:

> Without a solid knowledge base concerning the region or issue to which the analyst is assigned . . . the individual will not even know what questions to ask. That is, the person will not really be qualified to be called an "analyst."[61]

Figure 6 details the knowledge requirements for an intelligence analyst in the NSA model. As used by the authors of the model, "knowledge consists of familiarities, awareness, or understanding gained through experience of study; it includes both empirical material and that derived by inference or interpretation."[62]

Target knowledge provides context and understanding which is derived from cultural familiarity, the subtle messages in language, and other indicators that can only be divined from knowledge and understanding of the target. Target knowledge is what makes an analyst truly valuable to his commander or customer.

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[61] Ronald D. Garst, and Max L Gross, "On Becoming an Intelligence Analyst," *Defense Intelligence Journal* 6, no. 2 (Fall 1997): 55.

[62] "Knowledge," The American Heritage Dictionary, 2nd College Edition, 1976 ed.
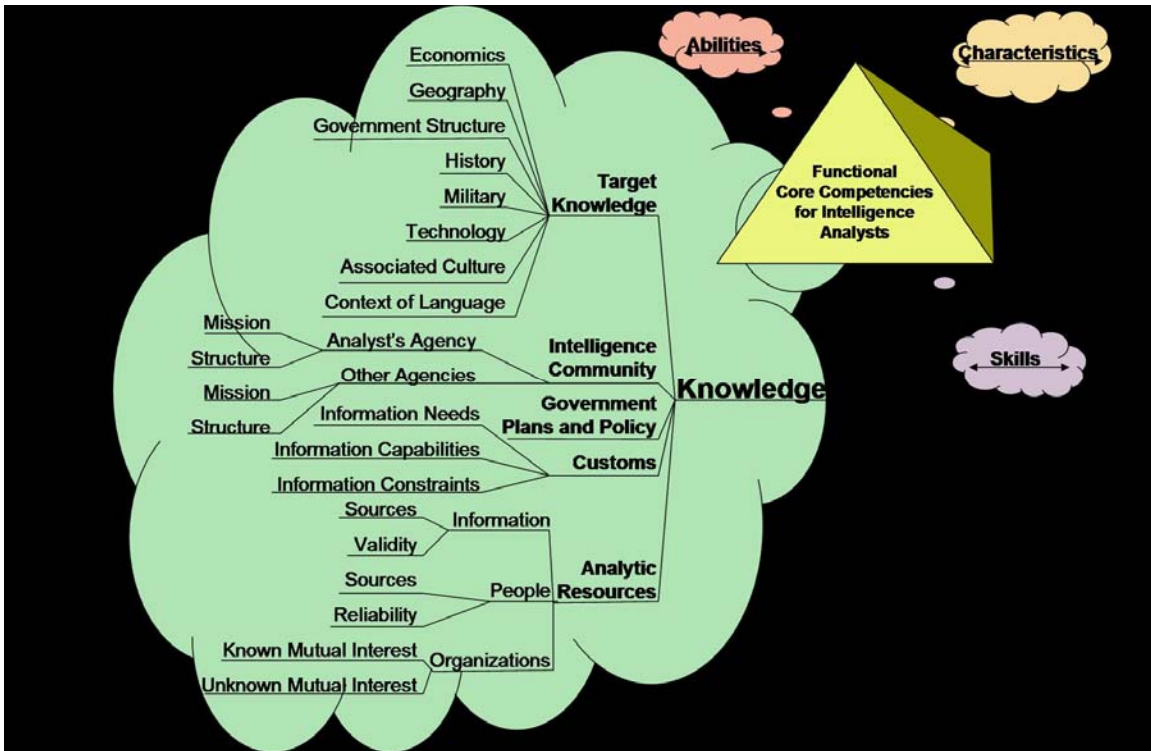
Figure 6. Knowledge

Professional knowledge comprises the remainder of the knowledge competency. It incorporates

knowledge of the larger Intelligence Community, knowledge of the unit, commander, or

customer, and knowledge about the analytic resources directly and indirectly available to the

analyst. Professional knowledge allows the analyst to anticipate and answer the unique needs of

her/his customers in a manner that influences their decisions most effectively.

Model Summary

The NSA Moore and Krizan model of functional core competencies for intelligence analysis is

the best, most complete, and perhaps the only model in the IC that addresses the competencies

required of successful intelligence analysts. Their study suggests that the necessary skills,

abilities, and knowledge can be trained and refined by rigorous institutional training programs

tailored to the communities and consumers they serve. The characteristics required of

intelligence analysts can not be trained and therefore must be identified prior to selection for

analytic training or at least in the very early stages of it. These core competencies are just that.

They are not different for novice analysts or experienced ones. Clearly, more senior analysts are looked to and expected to lead the analytic efforts of their sections, so greater managerial and supervisory skills are needed, but nothing is subtracted from their core competencies. With this model of analytic competencies established, and understanding the realistic needs of commanders and consumers, a comparison between general analytic training at USAIC&S and what is accepted as appropriate within the larger Intelligence Community can be made. Once again, the unique soldier skills required to perform analysis in military units and under austere conditions will not be examined as those skills form a fifth competency unique to military analysts and common to all soldiers. Those skills are currently being incorporated into TRADOC and unit training programs. What will be examined are the training programs for analysts in general, without regard to rank, as the core competencies of analysts are just that, core competencies which apply equally across the spectrum of the analytic intelligence professions, whether military, civilian, DoD, or federal.

CHAPTER 5 - WHAT IS THE DELTA?

Ludwig von Bertalanffy in his work titled *General Systems Theory* warns us via a quote from *Sociology Theories of Today*, when referring to the study of systems that ". . . it is the "human element" which is precisely the unreliable component of their creations. It either has to be eliminated altogether and replaced by the hardware of computers, self-regulating machinery and the like, or it has to be made as reliable as possible, that is, mechanized, conformist, controlled and standardized. In somewhat harsher terms, man in the Big System is to be--and to a large extent has become--a moron, button-pusher or learned idiot, that is, highly trained in some narrow specialization but otherwise a mere part of the machine."[63] This criticism exists today and might be applied in some degree to certain Army intelligence professionals. Considerable training has

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[63] Ludwig von Bertalanffy, *General Systems Theory; Foundations, Developments, Applications* (New York: George Braziller, Inc. 1993), 10.

been dedicated to learning and employing automated systems on the battlefield. This type of training is relatively easy to institutionalize and establish traditional tasks, conditions, and standards that can be trained, evaluated, and certified. What is difficult is establishing training that addresses the unique characteristics of individuals and their own personal learning styles and characteristics.

Discussions with the course managers, training developers and integrators, and senior trainers at USAIC&S, coupled with detailed examinations and analysis a selection of the available course materials currently being taught at the Army Intelligence School suggest that Huachuca is attempting to reform its core instruction but is slow to do so and is not adequately doing so in many critical areas. Requests for information from USAIC&S yielded ten course programs of instruction (POIs) that in title or content addressed analytically oriented courses. One of these was from the 96B10 course for AIT/IET soldiers, two were from the 96B30 course taught in BNCOC, one was from MIOBC for entry-level officers, five from the MICCC for captains, and finally one was offered from the 350B Warrant Officer course. Figure 7 depicts these courses, the level of instruction, the time dedicated to teach them, and the version for reference. In no way should these courses be considered all inclusive and reflective of the total effort at USAIC&S, but they are the best and most current examples that course managers and instructors could provide to showcase USAIC&S intelligence analyst training of core competencies and critical tasks. These courses will be referenced to assess the effectiveness of the USAIC&S POI in relation to the Moore and Krizan Core Competencies model.

Course Title	Course Audience	Hours of Instruction	Course Version and Date
Intelligence Analysis	96B10-Intelligence Analyst Course	51 hrs 20 min	v.006–1 Jan 1900 sic
Link and Pattern Analysis	96B30-Intelligence Analyst BNCOC	14 hrs 25 min	v.005–1 Apr 2004
Pattern and Link Analysis Evaluation	96B30-Intelligence Analyst BNCOC	09 hrs 00 min	v.005–1 Apr 2004
Predictive Analysis	50B10-All-Source Intelligence Technician	02 hrs 00 min	v.011–28 Jul 2003
Fundamentals of Analysis	35D10-MIOBC	08 hrs 25 min	v.003–1 Jan 1900
Brainstorming	35D30-MICCC	01 hrs 00 min	v.005–12 Jul 2004
COA Analysis (War-gaming) & Comparison	35D30-MICCC	15 hrs 10 min	v.005–12 Jul 2004
Integrate Critical Thinking Skills Derived from Military History Methodologies into the Advanced Training and Education of Subordinate Officers, Warrant Officers, and Non-Commissioned Officers	35D30-MICCC	01 hrs 00min	v.005–12 Jul 2004
Analysis – Answering the "So What?"	35D30-MICCC	02 hrs 00 min	v.005–12 Jul 2004
Pattern and Link Analysis	35D30-MICCC	02 hrs 00 min	v.005–12 Jul 2004

Figure 7. Analytic Courses Evaluated from USAIC&S[64]

Analytic Training at the Army Intelligence Center

Analytic training at the USAIC&S is generally divided into three categories: AIT/IET enlisted training and BNCOC training of Staff Sergeants; officer basic transition and advanced courses (MIOBC, MIOTC, and MICCC), and initial and advanced Warrant Officer training. There is little to no available evidence that suggests any set of core competencies has been established

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[64] POIs as indicated from the USAIC&S course managers and Army Knowledge Online website, Intelligence Community forum.

across the spectrum of the analytic professions. Each of the three divisions of training have their own doctrinal list of critical tasks by Military Occupational Skill (MOS) and levels, but no established set of core competencies exists or are certified to ensure commanders are receiving qualified analysts. While there are clear delineations between the scope of duties and both supervisory and staff functions of the enlisted, officer, and warrant officers, it is equally clear that all of these professions must share common core competencies to work and produce intelligence together.

Considering the Moore and Krizan NSA Core Competencies Model, an assessment of the training and certification of qualified ECB analysts can be conducted. The end result is an analyst, whether enlisted or officer, who can perform basic intelligence analysis, functions competently as gauged by the accepted standards of the larger Intelligence Community. As there is no available model currently being used to ensure common analytic training and certification occurs within USAIC&S, this analysis may seem unfair, but it is essential for the Army intelligence professions that some basis for analysis be established so evaluations and, if necessary, adjustments can be made to analytic training at USAIC&S to meet the reasonable needs of Army commanders and consumers. The Moore and Krizan NSA model will be used to establish this basis for evaluation.

As previously discussed in chapter 3, personal characteristics (figure 3) are inherent traits that successful intelligence analysts bring to the profession and are identified and screened for during recruitment and assessment. To successfully identify qualified personnel for analytic professions in the Army, TRADOC and Recruiting Command along with USAIC&S, INSCOM and the Army DSCINT need to study and make changes to the recruiting strategies to assess and recruit qualified applicants into Army analytic professions. Such a study is beyond the scope of this paper.

Abilities of Intelligence Analysts

The abilities of analysts bridge the gap between both skills and knowledge and the personal characteristics of analysts (see figure 4). These abilities include communicating, teaming and

collaborating, and thinking. These abilities are skills that should be trained and assessed throughout the course of all training and evaluations as they apply to all aspects of intelligence analysis activities.

Though little concrete information is available for analysis, lessons such as the AIT *Intelligence Analysis,* BNCOC *Link and Pattern Analysis,* and MICCC *Pattern and Link Analysis* appear to dedicate time to thinking aspects of abilities as they address information ordering and pattern recognition activities. Teaching how to develop a Modified Combined Obstacle Overlay (MCOO) and situation template, as well as developing the tools to support pattern and link analysis does this. These courses also address numerous areas in the competencies of skills and knowledge. The *Fundamentals of Analysis* lesson offered to MICCC officers is perhaps the best lesson for reinforcing abilities as it dedicates several hours to communicating, teaming, and thinking activities.

While all of these courses address some form of abilities, none of them attempt to establish a basis for explaining, training, and assessing the three supporting tasks of the core competency abilities and their subordinate tasks. Of the three tasks, thinking appropriately receives the most attention, but none of the three are adequately addressed or clearly reinforced throughout the courses of instruction to establish a firm basis from which skills and knowledge can be leveraged. Most notably, there is no common or core training competency reflective of the abilities competency that unites the three main divisions of instruction at USAIC&S across the intelligence analyst professions. This likely results in a disconnect when the three professions work together within units as no common standard for communicating, teaming and collaborating, or thinking is evident in the USAIC&S materials examined.

The skills competency of USAIC&S trained analysts will next be examined to attempt to identify common threads between the three.

Skills of Intelligence Analysts

Skills are the first truly learned abilities that separate analysts from other professions, and this is true as well for military analysts. The skills trained at USAIC&S and other Army intelligence training activities appropriately reflect the culture and unique methods of the Army. Some of the skills are directly tailored to provide the products and resources required to answer the informational needs of the Military Decision Making Process (MDMP), a proven effective model for decision making employed by all echelons of the Army, and the Army's intelligence cycle. While these specific requirements exist, embedded in them are the need to bring the eight sub-skills associated with the skills competency (figure 5) to bear in order to provide the analytic effort with the resources it needs to serve the IBOS, commanders, and consumers.

An analysis of the skills competencies against the provided lessons identifies some highpoints as well as many glaring deficiencies. Literacy, Computer Literacy, Expression, and Information Gathering and Manipulation all appear to be addressed at various levels throughout the ten lessons analyzed. Speaking and reading are assumed to be reinforced throughout the courses and computer literacy is addressed in ASAS (All Source Analysis System) and OSINT (Open Source Intelligence) blocks of instruction. Again though, no common core of competencies can be linked across the three divisions within USAIC&S between enlisted, warrant officer, and officer training courses. The enlisted trainers appear best able to link skills within their division, but across the board, inter divisional cross walking of competencies does not appear to be well thought out or coordinated. Training Development and Integration personnel at Huachuca report that in the MICCC the analytic skills for both the conventional and unconventional side of operations are now the focus of the Intelligence Support to Brigade Operations (ISBO) block of instruction with heavy emphasis on Applied Tactical Cultural Orientation Training (ATCOT), analytic skills, and S-2 sections analytic operations.

Critical thinking, perhaps the most important skill, appears to receive little formal instruction, and there is even less evidence that it is evaluated and assessed throughout the courses of instruction.

Several of the "analysis" titled courses attempt to get at some form of critical thinking, but little if any discussion of the methods or pitfalls of critical thinking and intelligence reasoning appear in any of the course materials. The "Integrate Critical Thinking Skills…" MICCC 1 hour lesson is a misnomer, as it actually is more of a history course than a discussion of critical thinking skills. The MICCC *Analysis-Answering the "So What?"* lesson makes the most honest attempt at studying analysis and critical thinking, but two hours is nowhere near enough time to properly cover this all important skill.

The two most glaring deficiencies between the Moore and Krizan model and USAIC&S training is the absence of foreign language proficiency and research training. For many good reasons, the Army has not invested in foreign language proficiency and area expertise for its analysts. Only in SIGINT disciplines does the Army occasionally see language capable analysts teamed with interpreters or intercept linguists. This lack of emphasis on language proficiency comes with a price though as context and subtle nuisances are lost upon all-source analysts with little or no language proficiency or country expertise. INSCOM Theater Intelligence Groups/Brigades (TIGs/TIBs) make an honest and noteworthy attempt at bridging this gap but only in limited numbers and only when their assistance is directed by COCOM commanders. ECB intelligence units and combat arms units will seldom reap the benefits of their augmentation and analysis. The issue of increased modularity is likely to exacerbate this problem as UAs and UEx's lose their regional focus and prepare rapidly for more broad and diverse missions across numerous continents and countries. Although reports out of Huachuca suggest that cultural training in some form will be provided to trainees and deploying forces, at present no courses within the three divisions at USAIC&S attempts to adequately address this problem although some efforts are being made to touch on the issue of cultural awareness. Knowledge will be the final competency that is assessed.

Knowledge for Intelligence Analysts

According to leading members of the JMIC, knowledge of the target or region is what makes an analyst valuable and qualified to be called an analyst. With this in mind, this paper will now examine what knowledge competencies (figure 6) are stressed within the selection of lessons from USAIC&S analytic courses.

USAIC&S strong point has always been its focus on foundational and specific orders of battle (OB) and the WEO of conventional forces. It can be assumed that this strength remains intact today. Analysts are not adequately trained though to be prepared to face the asymmetric threats currently engaged with US forces abroad and those outlined in the Contemporary Operating Environment (COE) estimates developed by TRADOC and JFCOM. This author believes this is because there is little to no regional or target focus provided to analyst and analytic leaders as they are managed as general all-source analysts and not as country, region, or target specific analysts as most national analysts are. There are practical reasons for this as divisions are losing their regional orientations to adjust to the requirements placed upon them by modularity and transformation. The TIGs/TIBs fill some of this void, but as previously stated it is unlikely that their expertise will make it to most maneuver battalions or brigades, where much of future analysis will occur and where the tactical commanders and consumers reside. Additionally, any regional expertise that these intelligence units possess is usually home grown, and there is no personnel management plan in place that ensures these analysts will retain their regional expertise as they progress in their careers.

Of the ten courses analyzed, none of them address specific target knowledge with any semblance of the fidelity needed to provide reasonable analysis to commanders and consumers. USAIC&S does a solid job of producing relative generalists, or skill level "10" equivalent analysts, but does not train or certify any level of regional or target expertise. Analytic resources are addressed adequately in many of the "analytic" titled lessons, as are the customs *o*f their supported commands, the intelligence communities they might interact with, and the planning resources of

military units. According to DIA's JMIC, the CIA's Kent School of Intelligence Analysis and NSA's Moore and Krizan model analytic training at Huachuca does not produce an analyst with the knowledge competencies needed to fulfill the needs of today's and tomorrow's intelligence consumers.

USAIC&S Summary

The United States Army Intelligence Center and School has provided the force at large with adequately trained intelligence professional who have admirably met the challenges they faced through the Cold War and into the 21st Century. To meet the dynamic asymmetric challenges that challenge the nation and the Army today, USAIC&S needs to institute a dynamic paradigm shift in its selection, assessment, training, certification, and life long learning strategies for all of its analytic intelligence professions.

Based on an assessment of a limited number of lessons from the three major divisions of USAIC&S using the Moore and Krizan Functional Core Competencies for Intelligence Analysts model; the training and certification of Army analysts is not on par with the larger Intelligence Community's standards and are inadequate to meet the reasonable needs of commanders and commanders in ECB units. MOS and career field lifecycle management and assignment issues exacerbate this issue but are not the root cause. The adoption of general standards across the analytic professions in terms of core competencies is a possible solution. Adopting a model for gauging the competencies of intelligence analysts in parallel with other national intelligence agencies is one way of ensuring certified analysts are available to serve the needs of ECB commanders and consumers. The largely endorsed and accepted competencies of the Moore and Krizan model are an effective tool for reorienting and reorganizing Army intelligence analytic career fields

CHAPTER 6 – CONCLUSIONS AND RECOMMENDATIONS

Conclusion

The art and science of intelligence and intelligence analysis is extremely difficult, potentially more so today than in the past. On one hand, there are exponentially greater means today to collect, database, process, collaborate, and disseminate information and intelligence than there ever has been in history and even the recent past. On the other hand, adversaries today have many of the same technologies available to them and have demonstrated a propensity to dynamically adapt and employ asymmetric options to counter US strengths and advantages, often quicker than the Army can. To meet this challenge head on the IBOS cannot afford to take an amateur or uninformed approach to intelligence analysis.

Through the course of this brief examination of intelligence analysis, the arguments in this paper have demonstrated that current doctrine calls for predictive intelligence, yet predictive intelligence is an inaccurate term and does not describe what commanders need versus want. Commanders need the delta between facts, or what is known, clearly identified, and separated from what is unknown so they so accurate risk management can be accomplished. Once this is established, commanders then need an accurate and professionally developed expert analysis of who the threat(s) is/are, what they are capable of doing, and a probabilistic assessment or forecast of what they are likely do to next so they can maintain information and decision superiority. Leaders know that in the Army's most recent experiences, namely Operation Iraqi Freedom, the majority of ECB tactical and operational level intelligence analysts and sections were either unable or incapable of satisfying the realistic needs of their supported commanders and other consumers to the level of fidelity and satisfaction that they and doctrine required. But intelligence professionals also know that adequately recruited, trained, educated, seasoned, and led analysts are capable of delivering what commanders need.

This study has demonstrated that USAIC&S began heading in the right direction in the late 1990's but has been too slow to respond to the evolving COE. This is not an indictment of

leadership or individuals. It is simply a statement of fact. USAIC&S is manned with superbly

qualified and motivated leaders and cadre, but they neither had a clear direction to purse the

course of change nor a clear end state to drive towards. The larger national Intelligence

Community was challenged with similar problems to differing degrees. Professionals dedicated

to the betterment of the analytic intelligence professions within the CIA's Kent School for

Intelligence Analysis and Center for the Study of Intelligence, DIA's Joint Military Intelligence

College (JMIC), NSA, FBI, and other agencies and centers have dedicated countless hours and

dollars to this question. In May of 2003 the JMIC published Moore and Krizan's model of the

functional core competencies for intelligence analysis. This study offers possibly the best model

of competencies by which analysts should be recruited, educated, trained, and assessed or

certified against. A rapid reorganization of and reorientation of all of the Army intelligence

professions against this model would provide the direction and end state that the Army's

commanders and intelligence consumers need to meet their reasonable intelligence analysis

needs.

Finally, an abbreviated examination of USAIC&S suggests that the curriculum and doctrine are

not on track to meet the needs of the force. USAIC&S should seize the opportunities available to

them under the current Army DoD legislative and executive branch leadership to secure the

resources and momentum to initiate a paradigm shift in intelligence training that aligns it with

that of the larger Intelligence Community and the realistic needs of Army ECB commanders and

intelligence consumers. General Schoomaker's and Acting Secretary of the Army Brownlee's

Fiscal Year 2005 Game Plan is full of references to their support of change and specifically

addresses intelligence reform in many aspect. Most notably the document states:

> Of primary importance, we must understand the character of the irregular
> warfare we now face and adapt accordingly. In waging this war against
> determined adversaries, we have arrayed a vast hierarchical organization against
> an elusive, adaptive network. Consequentially, to be effective, the Army must
> adapt – and eliminate irrelevant policies, processes and doctrine. We must move
> beyond marginal improvements – and work to create interdependencies with

other Services, while reinforcing a culture that fosters innovation, adaptation, and agility.

Our recognition of new realities, coupled with the temporary nature of increased resourcing, is driving the pace of our restructuring, the corresponding adaptation of our institutional structures, and the imperative to change our culture. We must also capitalize on other opportunities that will emerge. Likewise, we must be informed participants in the continuing and upcoming debate over defense policy, strategy, and resource choices--articulating with compelling logic both our capabilities and our requirements. This will establish the rationale for the Army to provide the forces and capabilities needed to serve the Nation--to wage war while transforming--today and tomorrow.[65]

Under this directive to change and commitment to resourcing, USAIC&S, in collaboration with national agencies and the joint community, is postured to rapidly advance the profession of military intelligence analysis and bring it in line with the demands of the force and the ever adapting COE.

John Keegan concludes in his study of *Intelligence in War* ". . . that intelligence, however good, is not necessarily the means to victory; that, ultimately, it is force, not fraud or forethought, that counts."[66] In other words, intelligence is an enabler, which should establish the grounds for a decision advantage over a belligerent. The job of the military intelligence analyst is to ensure his commander is better informed, but not to provide him with the one and only solution to a tactical or operational problem. "The better informed force will probably fight on the more advantageous terms" writes Keegan, but it is ultimately force not foreknowledge that has the ultimate influence on the battlefield. Clausewitz eloquently captures the spirit of victorious forces when he describes the attributes leaders must strive to develop, promote and reward in disciplined and well trained forces when he writes; "With uncertainty in one scale, courage and self-confidence must

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[65] Peter J. Schoomaker, and R. L. *Brownlee, Our Army at War – Relevant and Ready ... Today and Tomorrow; A Game Plan for Advancing Army Objectives in FY05 and Beyond: Thinking Strategically* (Washington, DC: Department of the Army, 28 October 2004), 1.

[66] John Keegan, *Intelligence in War; Knowledge of the Enemy from Napoleon to Al-Qaeda* (New York: Alfred A. Knoph, 2003), 334.

be thrown into the other to correct the balance. The greater they are, the greater the margin that can be left for accidents."[67]

Recommendations

To affect change within the analytic professions of the Army Intelligence Corps and Army analytic intelligence professions in order to meets the present and future realistic needs of ECB commanders and intelligence consumers, this author recommends the following. These recommendations are neither definitive nor all inclusive. Their rejection or adoption should be a result focused and detailed examination and exploration by qualified individuals and teams. Recommendations to consider:

A novice level analyst is not competent to meet the needs of the force. The current and projected structures for ECB intelligence sections, particularly divisions (UEx's), brigades (UA's), and their subordinate battalions do not provide the intelligence sections and IBOS with truly senior and experienced analysts and analytic leaders. Captain and lieutenant S2's are not analytic experts, nor are the mid grade NCO's, or potentially junior to mid grade warrant officers that might staff the modular UA's. These units, like many SOF and Ranger S2 sections, need more experienced analysts who are familiar with the targets likely to confront these organizations. The current TOE projections for UA's and UEx's allocate more analysts, but there appears to be no plan for more qualified analysts to fill these positions. The MI Corps should consider creating positions and structure for Limited Duty Officers (LDOs) similar to the Marine Corps, or DA civilians, to man critical garrison and deployment positions in the S2 and G2 sections of the new UA's and UEy's.

Another method of addressing the expertise needed of intelligence analysts might necessitate a return to Specialist 5 through 8 ranks to recognize analytic skills over individual general

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[67] Clausewitz, 97.

leadership skills. Instituting a truly regimental system would compliment such a change, as it would facilitate true specialists serving like targets throughout their career lifecycles.

Predictive is an inaccurate term that gives consumers a false understanding of what sound analytic intelligence should provide them with. No analyst can be trained to accurately predict complex, dynamically adaptive, non-linear systems such as belligerent social systems. Capabilities based assessments which probe more deeply than simple WEO templating, based on a solid study and understanding of belligerent systems and networks which yields probabilistic recommendations is a more realistic method that achieves doctrinal requirements to achieve information superiority. Prediction as a term of reference should be removed from the lexicon of Army operations and intelligence and replaced with an agreed upon and accepted joint definition more in line with forecasting. This is not a "happy to glad" or "kitten to cat" like trivial change. The importance of this change is the shift from the certainties associated with prediction to the more reasonable and achievable requirement of forecasting probabilities.

Draft Fm 34-3, *Intelligence Analysis*, should be distributed to the force and adopted, with minor editing, as the keystone FM for analytic training in the Army. Joint Publications should echo this document. The core functions of military intelligence must be clearly laid out in this document and explained.

The military analyst and the art of analysis must be regarded as a higher art form and developed in the same way leadership is in the Army. The move to code BDE S2 positions as BQ and centrally select UEx G2s is a move in the right direction and recognizes the critical analytic skills needed by commanders at the tactical and operational levels. Change leadership training in the MI Corps to reflect this shift in emphasis. Based on discussion and the announcement of the move to centrally selected G2 positions and the realization that the critical skill in the MI Corps has shifted, at least in part and rightfully so, appropriate to the changing conditions and the need for decision superiority to leading analysis. Training and structure should change in kind. Consider changing the recruiting process to include Limited Duty Officers (LDOs) like the

Marine Corps, more WOs, or recruiting analysts from graduate programs. Another option would be to take NCO's and Officers with demonstrated analytic aptitudes and bring them into the intelligence profession at mid career, or change the recruiting process altogether and recruit from professional and graduate programs.

Analysts should be recruited and trained more in line with DIA, NSA, and CIA analysts. Enlisted soldiers, warrant officers, and officers should be educated, trained, and managed along lines that allow for specialization and more in depth knowledge much in the same manner as linguists and FAO's are today. Analysts should be qualified in a language and educated to possess unique and specialized knowledge of specific targets, regions, countries, and cultures.

Decision makers and commanders must be trained to make decisions with less information. They must be comfortable in a more ambiguous environment with complex, often non-military, problems.

USAIC&S and or JFCOM via DIA, should open an Analyst University to train, nurture, guide, study, and develop ECB analyst training. There should be an undergraduate and graduate like structure to this school, which all analysts must certify and graduate through at various levels of their professional careers. Consortium courses should be available through the intelligence centers of the members of the extended Intelligence Community.

Commanders and consumers of intelligence analysis should not expect predictive intelligence or reporting to offer such a degree of fidelity as to render obsolete movement to contact. Movement to Contact (MTC) should instead remain the form of maneuver which is most trained, as it will always be employed within the tactical level of war. "Ambiguity is likely to remain a factor in combat operations indefinitely."[68]

Closer collaboration with the national Intelligence Community at large and the sister services, as well as academia, is needed to continuously revise and improve analytic training. Close

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[68] Fontenot, 424.

coordination with members of the defense industry should place improved analytic tools in the hands of analysts at the lowest levels of decision-making.

Increase the size and experience level of battalion and brigade intelligence sections as this is the level that is most likely be required to perform analysis and act in ways that will have immediate strategic implications due to operational and tactical actions.

Rank is not a measure of experience or expertise in the analytic professions. A field grade S2 has no more analytic training or education than does a 10 level 96B or junior grade warrant officer.

All of the analytic military intelligence professions need to master the core competencies outlined in the Moore and Krizan model presented in chapter 3. USAIC&S should adopt this model and restructure intelligence analysis training and education around its core competencies.

Final Thoughts

Clausewitz describes the inevitability that when closing with the enemy, a tactical movement to contact will span the final gap between forces. No degree of prediction can ever be of such fidelity that risks can be completely abated, contingencies or branches be negated, or frontages be so narrowed as to facilitate orientation upon the diverse intentions of individual human belligerent. Ultimately, prediction, like Clausewitz's theory ". . . must take the human factor into account, and find room for courage, boldness, even foolhardiness. The art of war, (like the art of intelligence analysis and reasoning), deals with living and moral forces. Consequentially, it cannot attain the absolute, or certainty; it must always leave a margin for uncertainty, in the greatest things as much as in the smallest."[69] Commanders must, therefore, train their soldiers and leaders for the broadest of possibilities, not narrow focused solutions promised by precise predictions enabled by hi-tech collection systems. Instead, he should expect from his analysts a solid assessment of the enemy and environment that offers sound analysis of probabilities,

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[69] Clausewitz, 97.

potential branches and sequels, and an assessment of the factors that might influence changes in

the belligerents probable COAs.

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