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Critical & Creative Thinking and Structured Analytic Methodologies:

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Critical & Creative Thinking and Structured Analytic Methodologies:
From “Think Flow” to “Work Flow”

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Introduction

A brigade commander recently stated “I don’t know that we teach analysis correctly.” ADRP 2-0 defines “Intelligence analysis is the process by which collected information is evaluated and integrated with existing information to facilitate intelligence production.” To clarify his statement, the commander remarked that significant strides have been made regarding the “what” of intelligence analysis, though we may not be aptly addressing the “how” and “when.” The analogy he used to qualify the how and when was that of a professional golfer who routinely practices (or rehearses) his or her swing mechanics. We need to train and educate our intelligence analysts on their analytic thinking (gray-matter) swing mechanics, and instill a rigorous and structured analytic battle rhythm that increases and improves analytic efficiencies. The train and educate terminology should not be taken lightly as they are two distinct terms. Training prepares for the “known.” Education prepares us for the “unknown.” That unknown should spark greater analytic dialogue within the intelligence enterprise regarding what our analyst training and education baseline should encompass as well as address the training strategies necessary to drive the Army intelligence community to a more refined analytic point. Before delving into what those analytic swing mechanics consist of, let us first review the premium placed on our analysis today and the operational and intelligence processes in order to better understand how and when our analytics come into play.

Operational & Analytic Crossroads

Much of our current threat lexicon is rooted to our post 9/11 overseas contingency operations; however, even prior to that attack catalyst we had already glimpsed the rise of a multitude of independent actors and potential threats or adversaries. Those remaining or current as well as emerging threats have been described as wildcards – networked threat actors capable of strategic impact via tactical activities despite

1 ADRP 2-0, Intelligence, 31 August 2012, paragraph 2-62.
potentially limited resources. Our threat models have evolved in an attempt to maintain and potentially overtake the operational pace of threats within diverse operational environments – threats we have described as highly adaptive and creative. These threats represent both a conventional and hybrid challenge. Our threat models will have to be equally adaptive and creative regardless of the intelligence problem which at any given hour could evolve or morph from an individual to a cell or group to an attack formation. The operational and analytic crossroads we find ourselves at is not driven purely by the complexity of the threat, it is also driven by our present thinking structure and the abilities to anticipate or forecast intelligence requirements prior to their perceived need. We must prepare relevant and applicable threat assessments that embrace multiple aspects of the threat and environment that potentially go well-beyond operational variables such as PMESII-PT in support of our Unified Land Operations doctrine. We do not require a new intelligence process in this endeavor; we simply must improve our understanding of intelligence analytics and the “think flow” we apply to the process.

The Army’s Operations and Intelligence Processes

The operations process is the Army’s framework for exercising mission command;

*Commanders, supported by their staffs, use the operations process to drive the conceptual and detailed planning necessary to understand, visualize, and describe their operational environment; make and articulate decisions; and direct, lead, and assess military operations.*

The intelligence process supports commanders by:

*Providing intelligence needed to support mission command and the commander’s situational understanding. The commander provides guidance and focus by defining operational priorities and establishing decision points.*

Of the four steps within the intelligence process (plan and direct, collect, produce, and disseminate), the plan and direct step is key for our intelligence analysts as this is where the Intelligence Preparation of the Battlefield (IPB) steps are executed as part of MDMP’s mission analysis and related courses of action (COA) steps. This essentially is the primary “work flow” environment for our intelligence staffs. Whether we are teaching IPB or executing the steps during an operational endeavor, rarely do we formally incorporate other analytic methodologies as supporting enablers within our IPB templates. That is not to say that analysts simply execute the IPB steps without putting

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3 ADRP 3-0, Unified Land Operations, 16 May 2012, paragraph 1-9.
5 ADRP 2-0, paragraph 3-1.
any thought into them – but, a structured analytic methodological approach or “think flow” is often missing from this effort as well as our running threat assessments. Structured analytic methodologies in concert with critical & creative thinking are an effective catalyst towards capturing that “think flow” and instilling an analytic battle rhythm that is rigorous, disciplined and adaptive. How the intelligence analyst and intelligence staff thinks is relevant to framing and understanding the intelligence problem and task.

**Framing the Problem**

ADRP 5-0 does a commendable job in defining the *Army Design Methodology* and describing the *framing* concept which underlines the design methodology.

_Framing is the act of building mental models to help individuals understand situations and respond to events. Framing involves selecting, organizing, interpreting, and making sense of an operational environment and a problem by establishing context. How individuals or groups frame a problem will influence potential solutions._

ADRP 2-0 addresses framing as one of the by-products of the analysis which assists commanders, staffs, and intelligence leaders in framing, stating, and solving the problem. That initial threat framing begins with our analysts though the correlation or lines of effort between what is necessary to frame and IPB’s step four (which includes development of threat/adversary COA models) is often blurred. IPB’s threat modeling calls for a conversion of threat/adversary doctrine or patterns of operation to graphics while ADRP 5-0 speaks to mental models. It is this mental model, albeit threat specific to relevant (and critical) data points, that our intelligence analysis training and education must address. The construction of that model and the thought process that goes into and guides its creation are at the very root of our analytic swing mechanics.

**Getting Intelligence Analysts “Left of the Blast”**

The Counter-IED methodology for “getting left of the blast” is a suitable metaphor towards helping us refine our analytic azimuth. How do we maneuver left analytically or in other words, provide greater rigor and structure to our analytic processes well before product creation and dissemination? Perhaps now more than ever, given our Army’s operational experiences and the nature of our threats – we rely a great deal more on what our analysts think and why they think it as well as getting the commander and staff analytically “where we are.” This higher premium on thinking is intrinsically tied to

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6 ADRP 5-0, paragraph 2-25.  
7 ADRP 2-0, paragraph 3-47.
critical and creative thinking (C2T). Our analytic teams must understand that C2T is essential to conducting analysis and producing timely, predictive intelligence.\(^8\)

For years our senior intelligence officers and commanders have talked about and been challenged with “getting inside the enemy’s decision cycle.” This challenge remains today, though it should evolve just like our threat models and our thinking based on the nature of our current and emerging threats. In order to meet this challenge, perhaps we should look no further than our own Army Design Methodology. The underlying concepts of our design methodology (critical & creative thinking, collaboration & dialogue, framing, etc.),\(^9\) are also likely intrinsic to the threat’s operational design—regardless of whether the threat is a cell/group or a much larger formation. This is just one example of how we get left of the blast as intelligence analysts. Though at first glance it may seem indicative of merely defaulting to mirror-imaging, frameworks such as this are constructive towards building better mental models, framing the problem, recognition of threat pathways (scheme of maneuver), and identification of threat COA indicators, and creating a red team visualization that provides valuable insight to the threat’s potential COA. The higher operational premium for critical and creative thinking requires our analysts to not only think more, but perhaps think better, as well as to think differently. In addition to improving our C2T skills, there is a renewed focus on the analyst’s ability to provide apt written and oral presentation skills in concert with C2T. This necessity underscores the venue requirement to get commanders where we are mentally.

Our analytic writing skills in particular have been sorely lacking. We have a tendency to talk like we think and to write like we talk. An improvement in our thinking skills will also transform our abilities to effectively communicate an intelligence assessment via the written word and that transformation begins with C2T. Our analysts (and intelligence leaders) should look for additional intelligence methodologies to help steer their team’s C2T through the intelligence cycle (those additional intelligence analysis methodologies exist though not all have been formally described within our current Army intelligence doctrine). With the current emphasis on intelligence writing and predictive analysis, there is another swing mechanics process that could aid our analysts in predictive intelligence writing. In many academic arenas, students are encouraged to use the “Five Chapter” format for research papers such as a Master’s Thesis or Doctoral Dissertation. Such a format with intelligence analysis parallels could look like the following:

Chapter 1: Introduction and problem Statement (framing)

Chapter 2: Literature Review (current and finished intelligence reporting)

\(^8\)ADRP 2-0, paragraph 2-62.

\(^9\)ADRP 5-0, paragraph 2-24.
Incorporating this proven academic type approach into our intelligence writing endeavors and drawing appropriate intelligence analysis parallels could potentially prove productive and insightful for both the analyst and the resultant analysis.

**Implementation of Analytic Tradecraft**

For several years now, multiple agencies have published primers pertaining to analytic tradecraft methodologies that run the gauntlet from Basic Structured Analytic Techniques (BSAT), to Diagnostic Techniques, to Argument Mapping, and to the Advanced Structured Analytic Techniques (both contrarian and imaginative). There are the occasional trade journals, such as “Structured Analytic Techniques for Intelligence Analysts,” which provide greater methodology specifics and prescriptive application. Unfortunately, these primers do not completely capture the analytic tradecraft family of methodologies whereby intelligence analysts see the perspective, utility and practice of applying multiple methodologies within a single analytic battle rhythm. Perhaps this omission is by design since many analysts do not think alike and few consistently apply their analysis using a structured mental format other than the contextual format provided by the intelligence process steps. A primary tenet of analytic tradecraft is to instill greater rigor and structure within our analysis, and yet – even analytic tradecraft proponents have difficulty describing what this structure should look like and how it should be incorporated within the educational baseline and training of intelligence analysts.

Over the past three years, the US Army Intelligence Center of Excellence has led efforts to design, develop, and embed analytic tradecraft training and education courseware into multiple professional military education (PME) courses. This enterprise line of effort was designed to initially support institutional analysis training but the program’s impact has resonated within the Army’s operational training domain as well. Senior leaders and analysts attend their respective PME and propagate analytic tradecraft methodologies and apply them against current mission sets. An enduring challenge for PME training developers and facilitators was the integration of C2T in concert with analytic tradecraft that is representative of a structured analytic *think flow* framework.

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An overview of how these subjects were woven together in Army intelligence PME courses is illustrated in the figure below:

*Insert “think-flow” to “Work-flow” ppt graphic*

Each box within the diagram addresses specific analytic tradecraft courseware. Each analytic tradecraft subject represents a collaboration and synthesis of multiple government agency and professional trade journal source knowledge. Each subject is presented in a seminar fashion featuring a scenario-based practical exercise relevant and applicable to today’s diverse operational environment. The clouds in the figure represent the analyst’s evolving questions as they attempt to understand, define, and refine their intelligence challenge. This “think-flow” to “work-flow” aids analysts at all levels of proficiency and echelons to incorporate C2T and analytic tradecraft into an analytic battle rhythm that has rigor, structure, as well as merit. To be more descriptive, this analytic rhythm spurs *gray-matter swing mechanics* whether the analyst’s existing sound mental framework is deficient or is simply nonexistent.

**A Thinking Forcing Function**

This illustrated analytic tradecraft diagram should not necessarily convey that analytic tradecraft methodologies exist solely “left of the blast.” Many of these inherent methodologies consistently come back into play during the mission analysis step of the MDMP and the IPB process ensuring adherence to proper analytic standards and evaluation of specific analysis and analytic products. Analytic tradecraft “reach-backs” should occur frequently upon receipt of new information. This also addresses the aforementioned “when” piece that we do not often see within our classroom instruction as well as during our operational intelligence analysis pursuits. To bring this topic full circle, the intelligence community should view the integration of analytic tradecraft as providing supporting thought enablers to the planning processes. They are representative of the forward thinking that is often missing from our initial and secondary assessments when we have failed to describe the options available to the threat by a relevant and coherent picture. Our threat visualization falls short when we fail to provide a viable connection or relationship to our commander’s visualization of the operational environment. The location and placement of analytic tradecraft instruction within the curriculum is just as important as the methodologies themselves. Of note, USAICoE’s 35F (Intelligence Analyst) committee is addressing *intelligence design* within their endeavors to create a curriculum that places C2T and analytic tradecraft in the “right” location combined with the appropriate education level of Bloom's taxonomy. For failing to link these methodologies with bedrock analytic approaches hampers the
synergistic dividend; it is like employing critical thought without benefit of creative thought.

**Dialogue, Debate, and a Decision Point**

We are at an analytic crossroads, in an operational sense and especially in our classrooms as we endeavor to prepare intelligence analysts for a diverse variety of myriad threats. A crossroads that requires much more than the standard answers we have provided to commanders and intelligence staffs – and even our students. Individual analyst acceptance of analytic tradecraft faces significant hurdles. Some feel that a move towards analytic tradecraft is a move away from evidence-based analysis. In reality, nothing could be further from the truth. Maintaining objectivity in our analysis is hard. While analytic tradecraft adherence appears to bring an analytic opinion into play, we must tie that opinion to evidence in order to provide a more comprehensive assessment. Post 9/11 we have routinely stated that our enemies have evolved and are both creative and adaptive. We have come a long way since 2001 as well, though a great deal of analytic work remains as we continue to plan and prepare for threats known and those yet to show their hand. We will need to be just as creative and adaptive as our enemies, and it should probably start with our thinking and our analytic approach to the problem set. The question that continues to challenge us is how can we harness, train, and educate our soldiers to understand and become critical and creative thinkers. At the core, analytic tradecraft is a systematic approach that inspires enhanced critical and creative thinking development. Soldiers must understand what they are looking for (ask the right questions), comprehend the data already collected, and articulate a clear and concise assessment to their target audience whether it be in writing or an oral presentation.

We need to determine the right educational pathways and bring greater analytic *swing mechanics* into play as we continue to prepare the next generation of intelligence analysts. Our present azimuth is to continue to rely on our foundational processes, complemented by greater C2T and application of analytic tradecraft in order to broaden our thinking constructs and perspectives. We are starting to see those dividends, especially as our Army continues to transition to the decisive action and regionally aligned training environments. The application of analytic tradecraft methodologies is a key enabler towards threat modeling and much more. Analytic tradecraft is a thinking catalyst; the connective tissue that holds our threat assessment together and ties our forward thinking to our existing analytic foundation. It is how we think and that thinking endeavor is at the very root of our analytic swing mechanics. Utility and practice may not make us perfect, but it will certainly make us better at intelligence analysis.
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