Thinking Differently: Unlocking the Human Domain in Support of the 21st Century Intelligence Mission

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Abstract

The author acknowledges that this is a very in-depth treatise of a subject that is trending more frequently right now. This journal – and others by the current selection of topics related to culture, the human domain and a highly volatile transnational environment – realizes the importance of promoting knowledge, skills and abilities (even attitudes) to enable mission success within that domain.

People are the currency of the human domain; their visible behaviors and symbols are one of the only ways to really discern their thoughts and motivations. Add in the cultural complexity of differing worldviews, beliefs and values that play on those thoughts and motivations and the domain becomes even less certain to decode. Factor in that U.S. military and civilian personnel directly, and indirectly, influence the course of interactions and behavior in the domain and the human domain becomes incredibly layered and dense, where meaning and purpose is difficult to extract and effort and skill necessary for success within the domain difficult to master. One of the primary keys to unlocking the human domain is knowledge about mitigating the array of unintended biases that spin out of human cognition; the most profound and compelling of those biases are cultural. This article is about just that; promoting thinking differently about the human domain, and more generally, the uncertain and dynamic transitional security environment that it is a part of. It goes beyond recognition of this need to provide an autopsy of how we think, the different kinds of thinking strategies we employ to try to make sense of and forecast behavior and events, and ultimately, how the development of thinking differently can mitigate the cognitive and cultural errors we subconsciously, even unconsciously fold into our analysis. The paper concludes with thoughts on developing a learning program that would introduce thinking differently. As it were, the author does not apologize for the article’s length. It is not surprising that to think about thinking differently requires a little extra ink.

Introduction

Recently, there have been articles within this journal (Rebugio, 2013; Martin, 2013; Hoffman & Davies, 2013) and elsewhere that have identified the human domain critical to the next phase of U.S. military strategy. One such conceptualization of the human domain refers to it as “the totality of the physical,
cultural and social environments that influence human behavior” (McRaven in Ruolo, 2013). Early Post-COIN postmortems, speeches and presentations by a variety of United States Government (USG) and Department of Defense (DoD) leaders have indicated that critical takeaways from the last decade of U.S. involvement in two long wars have more to do with mastering the culture-general and culture-specific knowledge and interpersonal skills necessary to navigate in that human-centric space which for many of us is veiled in ambiguity and uncertainty. It is an inescapable fact that wars are won, delayed or avoided in this human space that is not defined by traditional and conventional domains that can be conquered, overrun or defended. This realization is gaining traction in the consciousness of many following the last decade of war and an accelerating pace of transnational security threats (Martin, 2013; Hoffman & Davies, 2013; Lamb et al., 2013).

The last decade of American military and USG involvement in Iraq, Afghanistan and the more recent direct and indirect engagement in the Middle East, and other ongoing U.S. support to counterinsurgencies elsewhere have prompted a recalibration of overall DoD strategy and a diversification of missions away from the reliance on COIN as the pre- eminent U.S. military strategy. It is clear that long-term expeditionary counterinsurgency involving large numbers of U.S. forces will be considered as a last resort; however, approaches and programs that supported COIN will remain as actual or potential support to ongoing and future missions. Still, many now claim the demise of COIN as a strategy, even that COIN should never have been a strategy in the first place; elements of COIN have been forecasted to continue in future DoD engagements (i.e. Hames 2012; Ucko, 2012; Collins, 2013; Manea, 2013; Gray, 2013).

Speeches and comments by DoD leadership have portended a post-Afghanistan military future as one that continues the war on terrorism while balancing a less kinetic more challenging role of building and sustaining partnerships with allied and partner nations. This future will include the development of national and human security of nations and populations where security may be in danger or failing, opening the door for insurgency and terrorism (Obama, 2009; Panetta, 2012; McRaven, 2012; Odierno, 2012).

Nation-states and other more local government or quasi-governmental organizations are subject to insurgencies fueled by both internal and external actors such as terrorists, transnational and cyber-criminal elements, and extremists while also falling prey to environmental and man-made environmental crises. Flynn et al., (2012) suggests much of the efforts toward reducing global conflict should be aimed “left of bang” where policy options and other types of assistance can ward off escalating tensions leading to conflict. Both former Secretary of Defense Panetta (Panetta, 2012) and USSOCOM commander ADM McRaven (2012) offer complimentary perspectives where beyond traditional military involvement against terrorism, the DoD (in particular SOCOM) will continue a range of missions such as SFA, training, and humanitarian support (Magnuson, 2013), “Their missions are not secretive. They are not sexy. Nor do they involve low-flying black helicopters in the dead of night.” Afghanistan is winding down. This “will give us an opportunity to do more in places we have neglected” McRaven said (p. 1).

The last two decades have seen a remarkable shift in the transnational threat environment. “What we know and project about the future operating environment tells us that the significance of the “human domain” in future conflict is growing, not diminishing….to shape a peaceful and prosperous global environment will rest more and more on our ability to understand, influence, or exercise control within the human domain” (Odierno et al., 2013 - Strategic Landpower White Paper). However, little has been written on how we need to think about the human domain (see Martin, 2013 for an initial conceptualization), especially about those domain residents who prompt us to figure out what and why they are thinking, while we only have their behavior and other cultural artifacts to help us with piecing together what is occurring inside their minds. “Essentially… human population groups are complex adaptive entities and prone to behavior that the U.S. military has not quite gotten the grasp of…” (Martin,
2013) may be an understatement. New or modified technology cannot alone solve the gaps and deficiencies that exist in our understanding of and ability to interact in this behaviorally-defined space. “Many have oversimplified the concept to mean that in the past the U.S. military has done a terrible job of thinking about how people will act and react to our actions, but this is disingenuous. The real reason I think this concept has gotten a lot of play is that even though we HAVE [emphasis author] thought about people, we still do not seem to be having the effects we want” (Martin, 2013).

This article suggests as well that the human domain is a critical space to master and manage intent, purpose and interaction of the different actors involved. This newly defined (or re-defined) domain resists traditional military and intelligence conceptualization and analysis for a number of reasons, most of these reasons stem from deeply-seated cognitive, analytic and the most profound and least understood, cultural biases. Some of these reasons are:

- the domain does not coincide or align neatly with spatial boundaries defined by geopolitical, physical or environmental variables; one cannot draw absolute boundaries around the human domain;
- the defining variables of the human domain critical to the management of it are behavioral and based on constructs such as worldviews and underlying cultural lattices of belief systems and values of the actors (including military and/or intelligence personnel); in other words, these underlying cultural systems greatly influence the behavior that is observable in the human domain;
- Domain features are similar to the properties of culture (shared, holistic, learned). The human domain transcends the traditional domains, Air, Sea, Space and Land (and now Cyber); behavior found in each can be traced back to the human domain;
- “Knowing” about the human domain is critical, the kinds of knowledge necessary to understand the parameters of this domain include sociocultural knowledge domains that feature culture-general and region and culture-specific information;
- The application of these types of knowledge sets to ascertain meaning of behavior and to interact within this domain with pertinent actors is tantamount to success and requires mastering thinking strategies and interpersonal skills and abilities not traditionally a part of military operations or learning programs.

There seems to be two important strains that factor heavily in understanding and managing successfully when it comes to the human domain. First, this domain is being impacted/influenced by the increasingly complex international/transnational threat landscape that has a lasting impact as well on the conventional state-actor bipolar security environment. The present and future security landscape will consist, “of the threat of hybrid warfare, involving multiple entities; the increasing ability of non-state actors to destabilize entire regions and challenge national forces; the complexity of rules of engagement that constrain one side and enable the other to operate with near impunity amongst the people…” (Odierno et al., 2013).

Important to grasping the workings of the human domain depend on a host of sociocultural factors and information that can assist piecing together meaning of behavior in this domain, not traditionally a part of information collected and analyzed on the conventional domains associated with conflict. As we have found out, this sociocultural information is extremely relevant to asymmetrical, irregular and unconventional warfare to include stability operations, counterinsurgency, and counter-terrorism missions.

This knowledge set is comprised of culture-general knowledge about how human culture works and its universal tendencies and processes and more regional/culture-specific knowledge about how those cultural-general concepts and tendencies are translated within that specific domain either geospatially anchored or translated to more contemporary actors and behaviors in a human domain that crosses boundaries and borders. Scott Atran discusses the latter arrangement, where global connectivity creates hybrid associations and groups in a transnational more or less combination of virtual and scattered
geospatial points of reference (2010, 2013). Recently, a collection of analytical skills and methods have been bundled up and offered under the rubric of sociocultural analysis (SCA) that would promote ways of eliciting data and information that can speak more to the cultural complexity to the human domain (Flynn et al., 2012; Puls, 2010). SCA can help discern “complex social phenomenon” that can lead to a more robust explanation of “…how populations understand their reality, why they choose either to support or resist their governments, how they organize themselves socially and politically, and why and how their beliefs transform over time” (Flynn et al., 2012:13).

The second strain critical to operationalizing the human domain is developing and sustaining skills and abilities to “work” in the human domain, from interacting with a much more variable host of state and non-state actors to assist operational/mission goals involved, to include the population-centric counterinsurgency, Security Force Assistance (SFA), building enduring partnerships but also being able to “collect” and interpret data gathered from those actors to bring to bear for use in intelligence missions. Interactional skills for this include cross-cultural communication, cross-cultural negotiations, and rapport-building, etc.

These two strains play more importantly as the human domain is not restricted to a geospatial “space” but transcends time and place and can exist in instantaneously-constructed social media messages that cross traditional cultural features of religion, ethnicity, tribe, language and engage a millennial identity more focused on contemporary issues human rights and human security or less defined but just as compelling of a draw, sacred values (Atran, 2010, 2013). This, in effect, promotes, “the increasing pace and mutability of human interactions across boundaries, through virtual connectivity to form, act, dissolve, and reform the pursuit of hostile purposes” (Odierno et al., 2013). Elsewhere, I have posited that developing cross-cultural competence is necessary for 21st century military and intelligence missions (Sands & Haines, 2013; Sands, 2013; Sands, 2012, see also Sands and Greene-Sands in press, 2013). Cross-cultural competence prepares and provides capabilities to interact with the many different actors within the human domain and promotes the necessary skills to place one in the position to discern the meaning of behavior exhibited by these actors useful for forecasting and predicting future behavior. As I have explored and taught for the last year in support of culture learning in the intelligence community, there is a need to introduce a foundational capability, framed by skill-based cross-cultural competencies of perspective-taking and cultural sensemaking into the thinking strategies leading to successful mission operations across the spectrum of the human domain. I have labeled this capability, thinking differently, and it is critical to those who need to understand and interact with the people who make up this newly envisioned landscape, and just as important to consider the influence of the their own social and cultural orientation and culturally-influenced cognition on how they think (Sands & Haines, 2013). Thinking differently can apply equally to military organizations such as Special Operations Command and to the Defense Intelligence Enterprise (DIE) or other intelligence agencies. Both SOF and intelligence must be intimate with analyzing behavior that characterizes the human domain.

Thinking differently, as we shall see in the rest of this paper, represents a fundamental shift in how we approach, think, and make informed decisions based on this human domain. One of the primary purposes of this paper is to explore human cognition and how the cultural complexity of contemporary transnational security and the emphasis in the human domain will require behaviorally “rewiring” our cognition for success in the human domain. In effect, traditional and even more recent attempt to fold alternative analytical methods into the intelligence process does not meet the analytical need of analysts, collectors and other intelligence professionals to master the complexities of the human domain in the 21st century. There has been discussion about weaving non-traditional (alternative) analytical methods into the intelligence process (i.e, Fishbein & Treverton, 2004a; Fishbein & Treverton, 2004b; Babetski, 2012; Swanson, 2012; Berrett & Johnson, 2011; Sands & Haines, 2013). Promoting this discussion has been the
acknowledgement by many that the traditional state-centric analysis is deficient in providing the right kind of information about a much more culturally complex transnational landscape that often defies the cold-war perspective still apparent in intelligence analysis. Finally, it is not enough to call to task deficiencies in how the military and others must prepare to face a complex and interconnected world. This paper will end with an initial exploration of how thinking differently can be folded into a learning program that can introduce and accelerate the uptake and application of those requites and critical knowledge, skills, abilities and attitudes that promote thinking differently. Although this effort will concentrate on the intelligence process and the need to adopt thinking differently as a primary focus of analysis, it will also prove to be very applicable to other military populations like SOF who are also dependent on intimate understanding and interacting within the human domain.

Content

To begin this exploration of thinking differently, human cognition or thinking will be modeled based on Nobel Prize winning author and economist Daniel Kahneman’s (2003, 2011) systems approach utilizing two distinct but related cognitive systems and Gladwell’s theory on thin slicing (2007). Evolution drove the development of human cognition and key to this exploration is managing the unintended consequences of that development in light of a changing intelligence mission landscape and focus. Knowledge of the role of components and their interrelationship within cognition will be provided. Providing the community of learners (intelligence professionals) as well as learning professionals a primer on human cognition (and the overt and hidden dangers of unintended consequences of the evolutionary development of cognition) is critical to applying structured (often times synonymous with critical thinking) and non-structured thinking strategies to analysis to facilitate better forecasting and predictive capability. It is important to grasp how humans think to better know how to how to identify and promote an array of thinking strategies and methods better suited for the current and future intelligence need.

The IC has moved toward folding in critical thinking skills as well as promoting alternative analytical methods “to enhance their abilities to anticipate potential threats in highly complex, fast-moving transnational issues such as terrorism and weapons proliferation” (Fishbein & Treverton, 2004, p. 2). Critical thinking (CT) and alternative analysis are explored in the next section, thinking critically and alternatively. Although CT and alternative analysis provides a frame and an array of methods to facilitate more nuanced interpretation of the intelligence problem while offering means to drive to competing hypotheses, the operations of method still are considered analysis – disaggregating of part, utilizing logical or in many ways formalized operations to identify eventually a hypotheses or competing set of hypotheses that can be promoted to aid in explanation, if not prediction.

The section on thinking differently that follows considers the need to promote underlying skill-based competencies that are also engaged in cross-cultural competence as a process or means to better “see” the complexity of transnational security environments because it will facilitate entrance into perspectives of the actors that seem not to be evident in thinking and analytical methods described up to this section. Sensemaking and mindfulness are introduced in the beginning of this section as a continually iterative and within reason intuitive effort to offer a view of an environment. Sensemaking includes planning and questioning that leads to a process of “foraging” for answers (and disaggregating elements) which is then synthesized to form a “systematic” interpretation of an issue that can should lend itself to convincing explanation (Moore, 2011, p. 8). Mindfulness, being in the present and questioning process to acquire knowledge, as well as the knowledge itself, contributes to the need to evaluate levels of expectations of stakeholders (to include the analyst) and to continually challenge assumptions held by the stakeholders as well those held by the analyst(s) (Fishbein & Treverton, 2004a and b; Moore, 2011). Thinking differently, however, calls into question first that the intelligence professional is unable to consider the current threat
environment and in general transnational security environment because all analytical strategies and methods drive toward convergence of product and outcome. Even alternative strategies and methods recently proposed exist as part of a structured process. Thinking differently proposes a space that resists the traditional bindings featured in analysis. Just as critical is that any form of analysis suffers from the inability of those involved in the intelligence process to accurately reflect and interpret the core sets of beliefs (and worldview) of those actors that make up the dynamic transnational security environment (as well as even the more traditional state actors). Thinking differently also addresses the simultaneous exploitation of existing mental models of the analyst that prohibit a more mindful cultural self-awareness that will influence the reception and perception of beliefs of those actors that inspire and motivate behavior. It is critical to understand how humans think and analysts “analyze” to know how and where to apply cross-cultural competence.

This article will conclude with an exploration of a learning program that would promote knowledge transfer, application and synthesis to facilitate more effective analysis and related intelligence activities. Indeed introducing concepts related to culture, region and language are essential – driven by the growing complexity of the contemporary and future international and transnational landscape, including the support of military activities designed to promote Left of Bang efforts. Perhaps more valuable to the intelligence professional is the need to conceptualize how thinking and more non-conventional analysis is promoted and incorporated into practice and learning, enhanced by cross-cultural competence. This paper will chart a learning program that considers elements of region, culture and cross-cultural competence and its articulation with the development of an array of thinking strategies. Bottom-line, this paper sees the need to build capability to not only manage the workings of human cognition but to foundationally alter and direct, and at times to require stepping out of perspectives that run counter and contrary to our powerful and influential worldviews and belief systems while culturally making sense of that perspective.

Background to Thinking Differently

Robert Sinclair, a CIA analyst, published a 1984 monograph, Thinking and Writing: Cognitive Science and the Intelligence Analysis, that urged CIA and its Directorate of Intelligence (DI) to pay attention to the just then developing field of cognitive science and its application of “…powerful metaphors about the workings of our minds that have developed over the past two decades” (Sinclair 2010’s revised edition of 1984) and apply those metaphors to the “work of the CIA’s DI” (Sinclair 2010, p.1). Sinclair was treading on ground that had been partially tilled by earlier work of Richards Heuer on the implication of human cognition and its impact on analysis. Heuer’s Psychology of Intelligence Analysis is still used in many courses on analysis. Sinclair’s treatise identified the human mind and how it works as important to consider in analysis. Heuer’s work and book drew more attention to the “mental machinery” (Heuer 1999, p. 1) involved in analysis and the caution that being able to understand the analytic process “…is hindered by the lack of conscious awareness of the workings of our own minds” (1999:1).

Intimate to Heuer’s thesis, and foundational to this paper, is that people are not consciously aware or have experience of what goes on “inside” their mind and when it finally does become conscious thought, the working of this mental machinery produces unintended consequences such as cultural biases that can prove to be detrimental to the successful analysis. Daniel Kahneman peered inside this mental machinery and proposed a model of dual and sometimes contrary cognitive systems that explained this unconscious process (2003, 2011), exposing the unintended consequences as a function of who we are and how we think. Malcom Gladwell (2007) contributed a more popular book, Blink, with a similar thrust. Other popular works that probe the notion of cognition are John Nasibet (2008), Mind Set, Johnathan T. Evans, (2007), Hypothetical Thinking: Dual Processes in Reasoning and Judgment, Dan Garner (2012), Future Babble: Why Pundits Are Hedgehogs and Foxes Know Best and Jonathan Silver (2012), The Signal and the Noise: Why So Many Predictions Fail — but Some Don't
There is clearly an interest from a variety of perspectives on the power (or weakness) of prediction/forecasting capability.

Recently, there has been research and publications specific to cognition and intelligence specific to intelligence analysis by intelligence professionals that have introduced thinking strategies, such as critical thinking and alternative analytical methods to mediate the unintended consequences of our cognition (Fishbein & Treverton, 2004a and b; Klein, 2011; Moore, 2007, 2011; Harris & Striker, 2012).

Deconstructing human cognition to understand its processes and how to manage those processes to mitigate biases is critical to doing good intelligence. However, the implications of a contemporary transnational security environment and the complexity of actors, cultures, dynamic and shifting alliances that is far different than a conventional Cold War security environment introduces complications that demand a kind of thinking that must consider the influence of not just the analyst’s cognitive architecture, but the powerful effect of culture (worldviews, beliefs and values) on the analyst and those actors and groups that are being considered. This paper suggests that thinking differently (an awareness and process) can only promote better analysis; thinking differently is managing the unintended consequences of human cognition – bias – and its operation when considering those who are culturally different. To get to thinking differently, the intelligence process and community must move in a direction that is open to the non-traditional methods promoted by recent authors (several which seem to be fringe to the IC even today). The IC must recognize that due to current threat environment, the nature of prediction/forecasting and what constitutes products and outcomes should be reconsidered. Moore’s recent 2011 treatise on sensemaking was subtitled A Structure for an Intelligence Revolution, this paper suggests that the revolution is not fully developed.

**Thinking: Human Cognition**

Human cognition includes a group of mental processes that feature attention, memory, producing and understanding language, learning, reasoning, problem solving, and decision making. How the human mind accesses and makes sense of incoming information, how the mind makes inferences about that information and how those inferences lead to forming and sustaining beliefs, thinking in other words, is the bedrock of analysis. Primarily, the mind is a composed of a series of related mental models, or schemas, that have been constructed through direct and indirect experience based on social and cultural factors such as socialization, collective and individual worldviews, profession, and cross-cultural experience, among others. These schemas are appended and buttressed by a system of beliefs that act to guide cultural members’ behavior and contextualize meaning as well as influence the construction of schemas (Rentch et al., 2007; Heuer, 1998; Harris & Striker, 2012).

In general, schemas represent related patterns of thought that are a result of an organizing cognitive system that incorporates new knowledge or information, “knowledge structures that guide the comprehender’s interpretations, inferences, expectations, and attention” (Graesser & Nakamura, 1982, p. 60 in Rentch et al, 2007, p. 21). Schemas are what form the basis of interpreting incoming information, expanding and/or creating new schemas to handle the novel, surprising or foreign behavior is critical. Schemas are interrelated and more than one schema can be activated to address incoming information (same or similar behavior, events, and activities). Activation of schemas/and interrelated schemas is dependent on a variety of factors, accessibility, priming, external agency, emotional investment, and others (more on priming below). There are schemas for a variety of knowledge sets and as a template for skills and abilities, examples include schemas that correspond to archetypes, social roles and social knowledge, worldviews, and cultural understanding that enable “…individuals to make sense of their experiences” (Rumelhart in Rentshield et al., 2007, p. 21). A schema for cultural understanding (Rentch et al., 2009) is critical to making sense of foreign cultural behavior which is significant to the contemporary
security environment but as we shall see in the following sections, schemas can also be restrictive and limiting in the interpretation of cultural behavior. Once formed, a schema may be expanded or co-opted by new or novel experiences if the experiences vary dramatically and a cognitive restructuring will occur, spawning new schema (Rumelhart in Rentsch et al., 2007, p. 21). The next section introduces a model of human thinking. At the crux of this foundational problem is not just the workings of a cognitive apparatus wrapped up in the thinking systems or the associated behaviors that produce bias, but the need to subvert an evolutionary tendency through an array of unconscious and conscious thinking strategies.

**Fast and Slow Thinking**

The evolutionary development of the human mind and thinking is based on an efficient application of schemas that have promoted the survival of our species. Having to access and then quickly sort through a torrent of information that could lead to either survival or death promoted a human capacity to make sense/meaning of this information and be able to better predict outcomes – critically important in environments where threats to our ancestors, both overt and covert, are embedded in nature. “We are wired to detect patterns and respond to opportunities and threats without much hesitation” (Silver, 2013, p. 12). This is still the case for contemporary humans in a very culturally complex landscape rich in threats. Kahneman (2003, 2011) and Evans (2008) among others cast thinking as a result of two systems. The first system, the fast operating almost automatic system 1, generates impressions and feelings and uses these to construct accurate schemas and utilize predictive capability in familiar environments, “…with little or no effort and no sense of voluntary control” (Kahneman, 2011, p. 20). System 2 is the more slower, reasoned and attention-focusing system and “…allocates attention to the effortful mental activities that demand it, including complex computations. The operations of System 2 are often associated with the subjective experience of agency, choice and concentration” (2011:21) and acts to develop and sustain beliefs and enables deliberate choices based on what system 1 generates (Babeski, 2012:2).

System 1 works in a space where input aligns with existing schemas and judgment of input is needed quickly. The outcome of system 1 thinking is to define and focus possible options to a singular path. System 2 works best when there is a complex and/or novel space and the possibilities of judgment are based on innovative perspectives (Harris & Striker, 2012, p. 211). The systems receive input simultaneously, but the need to consider immediate action toggles System 1 initially. System 2 has a host of variables that conspire to create a more reasoned and measured approach. “The first system…is a quick, automatic, implicit process that been proposed to explain judgment….The other system, reasoning, is effortful, conscious, and deliberately controlled” (Harris & Spiker, 2012:211).

**Learning and Intuition**

In essence, what we are referring to when considering the operation of schemas, and their modification is the construction of knowledge. Learning is the reinforcement of existing schemata (assimilation) and the knowledge that comprises schema, or the process of enhancing or augmenting (accommodation) existing schema, or replacing schema. Learning can occur either in the operation of system 1 or the need to engage the more deliberate approach of system 2 to consider the significance of the information, and knowledge as it relates to meaning and prediction of future behavior.

Gladwell (2007) and others suggests that there is a human propensity for a quicker and usually efficient process that manages the potential information overload. This is especially germane to the contemporary information-rich environment. Our brains have an incredible amount of information storage, but pales considerably when faced with the amount of information generated daily; it is critical that our minds be efficient in how we select what information we choose to store. To Silver (2013), our brains process information through approximation, “we perceive far more inputs that we can consciously consider, and
we handle this problem by breaking them down into regularities and patterns” (2013:449). Labeled “thin slicing” by Gladwell, the mind processes large amounts of information through System 1 and relies on schemas to assimilate the incoming information. If a minimal amount of familiar (thin slices) cues exist in the patterns of knowledge and behaviors, then we unconsciously make quick decisions, or intuition, based on minimal amounts of information. As Kahneman suggests, the efficiency of system 1 draws little processing effort as it sorts through familiar information, behavior and situations. Assimilation, and the engagement of intuition, acts to conserve effort, always an important biological consideration. As long as our intuition is based on repeated experiences and familiar cues, system 1 can produce fairly reliable predictions of future occurrences in similar situations based on just small amounts of information.

However, there are unintended consequences of the way human cognition operates. When novel or new information or environments activates the schemata, system 1 attempts to assimilate the sensory input into existing schemas. Based on a series of behaviors, such as ignoring or forgetting input, the recentness of that schemata activation, expectation of the individual on what is being experienced, and the confidence in the schema, the interpretation, meaning and relevance of the information and its application as knowledge toward understanding future behavior can be skewed. This is generally referred to as bias and is a result of an error in system 1 processing. When system 2 kicks in to aid in processing, due to the complexity of incoming information these biases often go undetected or uncorrected. The information provided to system 2 is replete with these systematic and reinforced biases. System 2 although good at deliberate thinking based on a more measured “slower” approach does not recognize well the embedded biases that are continually passed on as system 1 is always operating. In addition, most schemas are “set” strongly in our cognition. Accommodation may incur a more compelling set of standards to modify or even discard the schema, and more importantly the patterns of knowledge that are engaged by that schema. In essence, system 1 errors, discarding what could be relevant information because it does not align with schemas - is a very real danger and leads to the formation and sustainment of biases, “systematic errors in specified situations” (Kahneman in Babeski, 2012, p. 2). Often, if the input does not align at all or there are “holes” in the sequence of information, existing schemata will be applied to complete the processing. Kennedy and Bugajska (2010) found that humans utilize a series of behavioral strategies that inhibit the faster system 1. Intentionally blocking stimuli either physically or substituting another behavior or performing another task are examples of promoting inhibition of system 1. We will explore the latter through engaging different thinking strategies later in this paper.

The Dangers in Prediction and Forecasting

Core missions of intelligence professionals involve an in depth understanding of a much more complex and interrelated landscape populated with a host of state and non-state actors and the need to derive meaning from behavior, events, activities to better facilitate forecasting and prediction. Silver (2013) casts a similar net when he suggests that the amount of information available today to bear on problems and the value or prediction creates, rather than defuses, complexity. It may be that re-defining what a prediction is to analysis is in order; it may be also that the utility of prediction to intelligence needs acts to impede information and potential understanding based on a conventional end-state. In other words, is how prediction been arrived at and its use debilitating to the kinds of information/data that will allow a better grasp of security threats? Silver says it best when he writes that humans have a prediction problem. They are not very good at it and that in its most ideal state as an objective assertion of the future, the best we can hope for is a subjective interpretation of an imperfect objectivity. Accepting subjectivity while still striving for objectivity is necessary to get us the best possible outcome that passes as a prediction is all we can hope for – “…belief in the objective truth – and a commitment to pursuing it – is the first prerequisite of making better predictions… [and the] next commitment is to realize that she perceives it imperfectly” (Silver, 2013, p. 14). Silver focuses in on issues that have been highlighted up to now and will be returned
to throughout the remainder of this paper as critical considerations for prediction and thinking differently overall. Invoking Bayes' theorem, Silver extends the notion of thinking differently about our ideas to actually “testing” them as outcomes in a future state, “We must think differently about our ideas and how to test them. We must be more comfortable with probability and uncertainty. We must think carefully about the assumptions and beliefs that we bring to a problem” (2013, p. 15). We cannot stop predicting, it is a consequence of our cognition, no matter the imperfect nature of its outcome. Prediction is also the driver to connect our subjectivity (perceptions) to the “objective reality” of the world around us.

In essence, intelligence analysis that churns to prediction will always be flawed and tainted by consequences of how we think. There are limits to prediction based on its conventional use in the intelligence process and as complexity of the human domain increases, or in some ways, we start to understand the dynamics of the human domain, in the number and kinds of actors included, the often times dramatically belief systems from the analysts that drive their behavior, and the potentiality of numerous options of human behavior, the depth and meaning derived from prediction becomes less meaningful. For instance, Kahneman sees two distinct kinds of predictions; the first is based primarily on empirically derived calculations and very detailed analyses of outcomes that range across finite and similar occurrences. These kinds of analyses produce a clear measureable relationship between variables, such as calculations of fuel usage for planes based on mission-type. This type of prediction involves an almost plug and play procedure as the knowledge and the mental calculations are easily retrievable.

Involved in this type of analyses, Kahneman details two sets of varieties, one that includes problems that draw on the experience and expertise found in familiar and repeated situations (and embedded in known schemas) which can promote a more accurate prediction. Here System 1 is in familiar territory and grinds out believable strips of future behavior while the biases inherent in system 1 thinking can operate to produce forecasts based on just minimal or thin slices of information. In the gaps that might break up information flow, schemas act to “fill in” the spaces and actually promote a more effective and accelerated analysis, leading to a more true forecast. Intuition works as constructed. For example, Babeski (2012) offers applying a burn rate of fuel for an airplane given a set of environmental or mission variables to produce a rather accurate prediction which can then be applied to a larger problem set.

The second type of prediction in a way overloads system 1 with variables and situations that defy quick and or simple associations to solution. Silver would characterize the problems associated with this type of prediction in the human domain as containing a lot of “noise” at first and the attempt at discerning patterns out of that noise to begin the construct prediction produces insufficient information based both on the types of cultural knowledge necessary and the meaning of behavior. It is the second type of intuitive thinking where the fallibility of system 1 is brought front and center and the confidence associated with the first type of intuitive prediction and those inherent biases creates flawed predictions. Here intuition collides with perceived “expertise.” The rub is that if there are any “familiar cues” identified in behavior, activities or situations that can be novel, surprising, or foreign, system 1 cranks out analysis based on existing schemas, or if the behavior has no familiar cues, system 1 reaches out to existing schemas and applies the familiar to explain the unfamiliar. System 1 offers up a best guess/estimate and proceeds to prediction because it has no other choice. [iii] System 2 becomes the stopgap measure to disrupt the flawed predictions given the second type of intuitive while maintaining the integrity of the intuition that is applicable to promoting successful analysis. It is properties of measured, “effortful” (Harris & Striker, 2012, p. 211) and slow thinking found in system 2 that begs articulation of “structured” analytic techniques (as we shall see in the next section). These strategies and methods need to be applied in a way as Kahneman and Silver both suggests that mitigates “biased, intuitive forecasts and predictions without also discouraging, delaying or even eliminating the intuitive insights that true expertise provides” (Babeski, 2012, p. 3).
Intuition is a double-edged sword it seems. The intelligence profession as most of American society prizes intuition and what it says about the individual and/or the enhanced capability it brings to thinking, and predicting. Intuition coupled with experience and other qualities many consider as an expertise and can override the ever-present system 1 errors (Klein, 1999, 2011).

However, expert performance driven by intuition can often drive judgments in wrong directions when the associations grounded in schemas are based on history and past validity (Thaler & Sunstein, 2008). “The associational processes used in System 1 that make expert performance so quick and powerful are the same processes that are responsible for systematic errors that experts sometimes make. Additional weaknesses of System 1 are that it depends on the quality and amount of experience an individual possesses, and it can’t be used effectively in novel situations” (Harris & Striker, 2011).

Kahneman provides “ground rules” for assessing the value in the intuition that is being used. Skill acquisition requires “a regular environment, an adequate opportunity to practice, and rapid and unequivocal feedback about the correctness of thought and action (2011, p. 416).” First, the strength of confidence cannot be used to measure validity. Second, two conditions must be present for intuition to be considered: an environment that is regular and predictable and the empiricism to gauge its predictability (Babeski, 2012). Deconstructing the myth of intuition as a power and instead considering it as a hyper-tuned system 1 where sensing an occurrence is actually the connection of extremely valid cues based on the regularity and experience of that regularity that can be applied to the environment generating those cues is important. Approaching intuition as a set of skills that requires training and repetition will help alleviate its shortcomings.

Notwithstanding the development of Klein’s naturalistic skills, identifying conditions and related strategies and techniques that can promote “trust” in the prediction is thinking through a range of analytic thinking strategies and associated methods. One must consider the intelligence process to be an example of what Kahneman labels as “low-validity” (Babeski, 2012, p. 4) in which intuition, even if considered expertise fails in promoting validity, much less certainty of prediction. In a sense, given the nature of intelligence analysis and the drive toward prediction/forecasting, it is suggested here that the accuracy that may have been implied in more conventional analysis in the past may be more difficult to achieve and even harder to measure when applied to the contemporary and for the foreseeable future a complex threat environment.

In evolutionary terms, our cognition was engineered for quick and efficient processing of our environment and carries with this processing “wiring”/predisposition for thin slicing that promotes intuition. Moving out of the stone age and into the information age, the quickness of searching and settling on patterns can often lead us to “see” patterns when none exist, or “finding patterns in random noise” (Poggio in Silver, 2013, p. 12). The cognitive system cannot be disconnected or “rewired” but the application of thinking strategies can be applied to promote “debugging” of propensity for system 1 errors especially when dealing with the need to predict/forecast behavior of a host of actors and non-state actors. Kahneman sees biases as more a problem of the cognitive operating ease of System 1. From our perspective, slowing it down would have created a short-lived species in a very sensory and threat-loaded environment on the African savanna (ironic perhaps is the replication in some ways of this environment in the transnational security landscape today). However, the slower, more reasoned approach of System 2 often fails to recognize when this “ease” is led astray, thus System 1’s bad reputation as the source of errors and biases, “predictable biases to cognitive illusions such as anchoring, non-regressive predictions, overconfidence, and numerous others (Kahneman, 2011, p. 417). System 1 runs constantly and under the radar of our consciousness. “It provides the impression that often turns into your beliefs, and is the source of the impulses that often become your choices and actions…. It contains the model of the world that instantly
evaluates events as normal or surprising. It is the source of your rapid and often imprecise intuitive judgments” (2011, p. 58). In essence, it cannot be turned off nor can its immediate effects be mitigated before it produces output. There are no alarms that ring indicating error, the voice of reason emanating from System 2 is barely perceptible yet it can and does provide reflection on not just intuition but as we shall see in later sections, considering the powerful influence of cultural worldviews and beliefs, as conscious and unconscious barriers leading to eventually awareness or even prediction. Kahneman sees this debugging process as possible but consisting of “considerable investment of effort,” while Silver suggests that avoiding our naturalistic tendency toward prediction will lead to the inability to reconcile subjective perception and objective reality. In other words, we are built to predict but our cognition has built in tendencies that threaten the utility of prediction in the human domain.

In brief, cognition, as most theorists agree, seems to be constructed around two systems that run continuously and play off each other’s fallibilities and strengths producing a synergistic response. However, falling between the cracks of articulation and the limits of each system is intuition and the effects of thin-slicing. Developing expert intuition may alleviate the system 1 errors, biases, associated with its processing. Yet, even the limits of expert intuition suggests that system 2 thinking is all the more critical when it comes to comprehending the complexity of the human domain featuring a multitude of state and non-state actors with shifting and varying alliances, dynamic intentions and end states that can bind even the most assumed contrary organizations. Debugging our cognition and reducing biases leading to improved judgments and decisions is possible, but requires a bevy of knowledge and skills not usually associated with analysis. It is reasonable to assume that a more complex and populated human domain that marks today’s threat environment will complicate and limit accuracy of prediction, making expert intuition subject to performance issues. In this next section, we will explore approaches to more structured thinking strategies. “The trick is in using structured techniques and approaches – or applied system 2 thinking - in a way that eliminates biased intuitive forecasts and predictions without also discouraging, delaying or even eliminating the intuitive insights that true expertise provide” (Babeski, 2012, p. 3). It is not surprising that based on the model of cognition presented, that System 2 processing is similar to what has been defined as critical thinking.

**Thinking Critically and Alternatively**

The legacy of Sherman Kent still reverberates within the IC and considers prediction as an end state and the scientific method acts to define capabilities through the collection and disaggregating of more and more descriptive data (Moore 2011). The context of the conventional threat environment and the naturalistic bent of science informed Kent’s view of “…the historian as scientist” (Moore, 2011, p. 6). For Moore, disaggregating larger volumes of data while storing for future use will not get to an understanding of how the real world stacks up – what is missing is context, reflection, interpretation, measured intuition, search for patterns and meanings and synthesis. “Traditional intelligence analysis generates forecasts or explanation based on logical processing of available evidence…” (Fishbein & Treverton 2004a, p. 1). In many ways, prediction (as defined and suggested earlier) may not be possible or beneficial in the more non-conventional threat environment. In addition, the traditional state-actor threat environment may not reflect the current state-to-state relationships, as the states themselves are subject to the current threat environment.

The intelligence community through a number of revelations and hindsight and the legacy of 9/11 has been taken to task by group of academics and intelligence professionals to revolutionize the intelligence process and promote a new paradigm of analysis that would include redefining end states and potential and refocusing effort and product. Structured analysis of any kind involves reducing problem sets or needs into discrete elements, causes and effects for example and then using operations developed through logical
processes, such as the scientific method, identify and test hypotheses that can yield a means of explanation and offer potential for prediction (Fishbein & Treverton, 2004a; Moore, 2011). There is a loose confederation of concept of strategy and method that forms the boundaries of intent and an informal agreement among these “revolutionaries” that the intelligence process can and should be improved. Approaches from industry and academia have been borrowed, modified, and adapted to the unique environment perpetuated by the organization and its obligations. Most of this body of work draws on heuristics theory and the model of complementary cognitive systems of which the thinking strategies and methods proposed serve the articulation and function of systems detailed earlier. In other words, system 1 errors based on restrictive e schemas and the tenuous relationship between automatic determination and measured reasoning are considered by attention to process. Yet even as late as 2011 (Moore, 2011), acceptance of these “new” approaches – even though the IC has recognized the value of them and policy and training programs been developed – has not led to full implementation into practice and learning programs. What can be agreed upon and has fueled this revolution is the inability to grasp completely the nature of contemporary complex transnational issues, the underlying belief systems and worldviews of those individuals and groups that are involved in those issues. Many if not most of these groups have only indirect or no direct affiliations to traditional nation-state actors, and this leads to a lack of understanding of what kinds of sociocultural data are necessary and useful to help frame the complexity. As we have explored in the section on human cognition, perhaps the most important consideration for this revolution is the way evolution has built our mind.

Critical Thinking

A quick summary of this collection of approaches represents can be useful. Critical thinking is perhaps the most salient to the community and has reached some legitimacy within the community as an approach, in so much as it drives to “…inferences that specify then who, what, when, why and how of the activity of interest and lead to appropriate actions” (Harris & Striker, 2012, p. 209). In the last decade there are several publications that have introduced and tied critical thinking skills to intelligence analysis and several of these have identified the benchmark of 2001 as a time that called into question conventional analytical methods (e.g. Moore, 2007, 2011). Critical thinking is: “…that mode of thinking – about any subject, content, or problem – in which the [solitary] thinker improves the quality of his or her thinking by skillfully taking charge of the structures inherent in thinking and imposing intellectual standards upon them” (Paul & Elder in Moore, 2007, p. 8). Critical thinking revolves around two behaviors, a metacognitive component (reflecting on the quality of reasoning) which entails thinking about thinking and a cognitive component that reasons to conclusion – improving reasoning while driving to a reasonable and “correct” conclusion (Moore 2007, p. 8). Critical thinking provides a process which will allow intelligence professionals to be reflective of their reasoning processes and to think about how their judgments are constructed and their path to a conclusion was reached with the same amount of reasoning as the “judgments and conclusions themselves” (Heuer, 1998). In essence, critical thinking is an effortful and deliberate process where one moves toward a conclusion while thinking reflexively on the process. It can involve a myriad of steps or stages and offers a “structured approach” to a problem or inquiry. As such, it moves beyond the scientific method, while incorporating inductive, deductive and abductive processes. Critical thinking skills map to functions, in this case analytical functions: assess and integrate information, organize information into premises, develop hypotheses and test hypotheses (Harris & Striker, 2012, p. 222).

Alternative Analysis

Critical thinking has received extensive treatment in education and philosophy and what it looks like as advanced cognitive abilities. However, critical thinking also represents a structured approach to problem-
solving for the intelligence community. Cross-cutting critical thinking is the realization that there are forms of structured analyses and methods which may not initially drive to forecasts through a traditional analysis, but will provide means to challenge assumptions or hypotheses and cast a wider net when it comes to possible outcomes, “…to address discrete questions – what if Ruritania acquires ‘the Bomb’” (Fishbein & Treverton, 2004b, p. 1). These methods have been labeled alternative analysis and as such can enhance critical thinking while remaining structured in process and focused on a limited set of probabilities. This set of methods is driven by the application of system 2 and provides means to mitigate system 1 errors while also identifying these errors if embedded in system 2 thinking.

There is an IC Directive on Analytical Standards that includes promoting alternative analysis where appropriate, analysis that is free of bias and distinguishes assumptions and judgments of the analyst among other considerations addressed in this section (IC Directive, 2007). A 2009 US Government publication, A Tradecraft Primer: Structured Analytical Techniques for Improving Intelligence Analysis offers a survey of alternative analysis methods – some simple, others more complex and time intensive – that include diagnostic (transparency of assumptions, arguments, data gaps), contrarian (challenges of current thinking) and imaginative thinking techniques (develop new insights, alternative different perspectives and/or outcomes” (A Tradecraft Primer 2009, p. 5).

Red-Teaming is a contrarian technique that works to illuminate or make conscious the perspective of an adversary, “…to enhance decision making, either by specifying the adversary’s preferences and strategies or by simply acting as a devil’s advocate (Red Team Journal).” More germane to the IC, red-teaming has been a staple of informal approaches in military science to aid planners in “emulating and adversary” in a process that is structured and iterative where team members are properly trained and carry with them appropriate subject matter expertise (Swanson 2012, University of Foreign Military and Cultural Studies (UFMCS) Red Team Handbook 2011). Red teaming, similar to other alternative analytical methods, is plagued with inconsistency of application, lack of formalized or standardizes processes, and lack of appropriate training (Swanson, 2012; DSB, 2003). There are examples both in document and practice where red-teaming has been a measured success. Sandia Labs and the University of Foreign Military and Cultural Studies have through red-teaming leveraged resources and sociocultural approaches to instill in their students and workforce improved critical thinking skills and a more relevant mindset of foreign actors (Sandia Labs IDART 2012, UFMCS Red Team Handbook, 2011).

The imaginative thinking group of methods includes brainstorming and divergent thinking as aids to generating a range of hypotheses utilizing a group concept. Brainstorming is used only periodically and is limited to 60-90 minutes (A Tradecraft Primer, p. 28). It like other alternative methods is a structured process, somewhat ironically considering the goal is to promote produce creativity among group members. Characterized by the oft-quoted “thinking outside the box,” in the divergent thinking stage, the group promotes an array of factors and ultimately hypotheses that an individual could think up while cognitive biases can be broken down by group members. In the convergent thinking phase, the range of factors begins to cluster, leading to a consensus conclusion.

It must be noted that in general critical thinking, and specifically application of alternative analysis methods, is not an end in itself and not always the right approach to take in analysis. The application of only some critical thinking skills or alternative analytical methods or failing to perform a critical thinking component can produce a fallible response and that education level and experience can affect the quality of a solution (Harris & Striker, 2012; Tradecraft Primer, 2009). Alternative analysis best responds as well within a structured pathway based on discrete questions.

Thinking Differently – a 21st Century Requisite
There is no doubt that the intelligence community faces an international and transnational security environment that is far different than what prompted the development of an intelligence organization and mission with the advent of the Cold War. Traditional analysis works well within known and bounded state-to-state diplomacy/relations and parsing a restricted range of outcomes, alternative analysis and methods can broaden the aperture of outcomes. As discussed in the Introduction, and touched on throughout this paper, the current transnational threat environment and the role the human domain plays offer a complexity that often times yields meaning that is incomprehensible to analysts and collectors. This environment features fluidity of state and non-state actors whose behaviors adapt to a fast-moving environment that speeds ahead of the ability to track and monitor. It also is characterized by a complicated web of worldviews and belief systems that incorporate known, traditional identities with cultural identities that have grown and continue to sprout on a landscape that has been made fertile by the inequities and marginalization brought on by globalization.

Traditional analysis works well within known and bounded state-to-state diplomacy/relations and parsing a restricted range of outcomes based on actors. Alternative analysis and methods can broaden the aperture of outcomes. For many, critical thinking and alternative analysis offer strategies and methods that can provide relevance to much of the contemporary intelligence/security environment that feature a spectrum of actors, situations, events and possible futures. However, many contemporary events and occurrences are not very susceptible to any kind of analysis, especially if answers come out of breaking apart facts and information in general from a known collectivity: too many hypotheses, too little evidence to support logical judgments. The intelligence community has pivoted toward the realization that the past threat environment may only represent a partial reality posed by the inclusion of a transnational security environment and the influence of transnational and non-traditional cultural groups on state actors. In effect, the way the game was played in the past is not the way the game has to be played now. Writes Gary Treverton on this change:

We at NGA used to look for things and know what we were looking for. If we saw a Soviet T-72 tank, we knew we’d find a number of its brethren nearby. Now, though, we’re not looking for things. Instead, we’re looking for activities or transactions. And we don’t know what we’re looking for (in Moore 2011, p. ix).

In this section, we will explore the need for intelligence professionals to not only think critically and apply an array of analytical methods, but to think differently. In essence, as Moore (2011) attempts to show, working within a structured analytic framework, even one that engages alternative methods already discussed, closes off the analyst to an array of possible behaviors or solutions because the analyst cannot fully engage and comprehend perspectives of the actors, or truly understand the limits/restrictions posed by her own set of beliefs. This may be because the right kind of sociocultural data has not been collected or maybe even more damning, the analyst cannot consciously, or unconsciously, comprehend the underlying belief system of the various actors and the cultural considerations that are a result of that belief system due to system 1 errors. Thinking differently will consider the application of skill-based competencies that promote cross-cultural success now being developed within the DoD and also considered necessary for successful fieldwork in the social sciences.

**Sensemaking and Mindfulness**

Two important components of thinking differently relate not to the kinds of prescribed “structured” methods or tools of analysis discussed so far in this paper, but to states of awareness. Sensemaking has
perhaps garnered the most attention in recent publications and research that promote the need for engaging alternative perspectives in intelligence analysis. Paik and Pirolli define sensemaking as “active seeking and processing of information to achieve understanding” (2012, p. 2168) while Klein refers to it as a “deliberate effort to understand events” (Klein in Rasmussen et al., 2009, p. 2). Sensemaking can also be a response to a departure from expectations. A composite view of sensemaking combines the intuitive-based application toward solutions as described earlier (and in more detail Klein, 2002) and the construct of *sensemaking* (as explored by Weick, 1995 and later utilized in a number of intelligence-related publications) as the process of comprehending the complex nature of the contemporary multi-actor environment that is or is considered relevant to goals and needs. Sensemaking can be seen as engaging processes that seek and filter information while also producing schemas that best fit the available data (Paik & Pirolli, 2012). Sensemaking works best when features of the problem set include discrete, informal rather than formal and focused more on unbounded rather than bounded issues. Promoting successful sensemaking is the quality of “mindfulness,” an ongoing state of deliberate awareness that has at its core; challenging expectations while reflecting on a host of potential alternatives. With regard to the current and future transnational security landscape, sensemaking and its underlying sense of vigilant mindfulness prompts a broader “mental readiness” to consider actions, events and symbols (signs) of threat rather than disaggregating constituent parts to drive toward identifying rational and alternative outcomes (Fishbein & Treverton, 2004b).

Moore (2011) provides perhaps the most in depth look at sensemaking in the intelligence community. His book, *Sensemaking: A Structure for an Intelligence Revolution* takes a rather comprehensive approach to sensemaking. Identifying a number of intelligence failures, Moore argues, as many authors so far discussed argue, that the standard model of intelligence, among other things: limits the aperture of information flow; presupposes coherency of evidence that is considered evidence; cannot consider the large and dynamic (certainly beyond finite) amount of signals (and level of background noise) that represents potential data; and due to the needs of the organization, imposes a linear structure on its analysis (even alternative analysis). In essence, Moore divides the world of intelligence problems into *tame* and *wicked* problems. *Tame* problems, or puzzles (a problem with a solution if the right information can be found) yield clear definition of adversary and “battlefield” and attack, the solution is obvious when engaged and can be objectively validated from a limited set of alternatives. Tame problems and solutions lend to resolutions of other similar tame problems (think the operation of system 1). Moore argues that the intelligence community operates as if its intelligence problems are tame, and he readily admits many are. However, he also goes on to clarify that tame problems may in essence be components of larger more messier or *wicked* or as “mysteries,” problems “… with several outcomes depending upon how underlying driving forces and combine… [and] questions without certain answers…because they are future and contingent” (2004b, p. 9).

Sensemaking and mindfulness can be beneficial to framing and providing processes to put the analyst in a position to think differently when it comes to the dynamic and fluid transnational security environment. As Moore has called the need to embrace sensemaking as a revolution, others have suggested that end states of the intelligence process may not accommodate traditional goal of prediction, nor specifically the traditional focus on products instead of outcomes (Moore, 2011; Denney et al., 2012). However, this paper will suggest that as analysts and other intelligence professionals think about problems, they are still failing to consider the effect of system 1 errors on their analysis. More to the point, they are failing to consider the power of *culture* in its many ramifications on the intelligence process and the end states. To this respect, the use of culture consists of a set of knowledge containing universal sets of domains and processes that undergird all human behavior. Culture features a worldview/lens that can both explain human behavior and constrain/restrict discerning meaning and is also is comprised of a set or core beliefs...
which motivate and compel human behavior. In effect, forms of analysis artificially constrain openness to a cultural perspective. Sensemaking and mindfulness can create the space to consider these aspects of culture, but utilizing and engaging cross-cultural competence and being versed in region and culture knowledge can provide a critical and foundational mindset to bear on actors, events and activities that make up the human domain and the transnational context.

The Human Imperative

Humans interpret their surrounding physical, social and cultural environments through a lens, or worldview. In essence, a worldview is the set of assumptions about the basic or fundamental aspects of reality that anchor and then influence our perception, thinking, knowing, and doing. More specifically, a worldview encompasses the sum total of knowledge, perspective, amalgamated philosophies of members, beliefs and values, commonly shared emotions and ethics, and more. Your worldview is more or less implicit. We rarely have the opportunity or need to articulate fully the content of it. Elements of a worldview are interrelated thereby it is difficult to tease out singular components. Often a worldview can be exposed through behavior. Worldviews are prone to stability; they are entrenched in society through formal and informal socialization, the power of traditions, ideology, and other mechanisms. The key component of a worldviews is a system of interlocking beliefs that are a set of ideas that are held to be true by the individual or shared by a cultural group. Beliefs impel/compel individual/groups to act across the breadth of interaction, reinforcing group beliefs and values while acting to define the type of interaction and behavior involved in a situation.

In part, humans relate to each other based on intra and intergroup relations. Worldviews and beliefs act to define in and out groups, a critical need to insure individual and group survival, as similarity breeds comfort. Beliefs act to promote group survival through group solidarity and are instantiated through cultural schemas. In essence we have aligned ourselves with groups who are similar, look similar and act similarly. We hold those different or unfamiliar in abeyance and confined in a space defined by caution. The upshot of this is that we as humans discern difference and use it to order our interactional environment. In addition, we assign behavioral indicators to help us maintain that distinction and these behavioral indicators manifest themselves through what anthropologists and others liable as ethnocentrism – “...our culture’s tendency to twist our judgment in favor of homegrown beliefs [and behavior] and against foreign alternatives (Etinson, 2013). Recent research also indicates that ethnocentrism may also be human’s way of establishing and upholding moral beliefs (Haidt in Etinson, 2013). Basically, humans see the world through an ethnocentric lens. In terms of system 1 errors and biases, this predisposition toward ethnocentrism is not just an interesting cultural fact or expression of human frailty. It is a known and deeply ingrained behavior. It colors and affects the nature of our relationships with other groups in deeply profound ways, even if that interaction is not framed in immediacy or played out in face-to-face interactions. It is not difficult to see the effects of ethnocentrism at play in the intelligence process, but we seldom acknowledge or are consciously aware of the influence of ethnocentrism on our thinking patterns.

In our daily existence, fathoming the meaning of other’s behavior is important. Promoting successful interactions or in trying to understand the motivations and meaning of the behavior is in part a function of anticipating the context that spurs those actions. Tomasello et al., (2005) suggests that an important facet of human cognition is “cultural cognition,” that which prompted human’s ability to evolve was the social collaboration that is a hallmark of humans. This collaboration required the cognitive ability to first understand others’ intentions, but to then to align intentions, shared intentionality, for future activities. “Participation in such activities requires not only especially powerful forms of intention reading and cultural learning, but also a unique motivation to share psychological states with others and a unique form of cognitive representation for doing so” (2005, p. 675). Cognitive science has advanced Theory of Mind
(TOM), similar to Tomasello’s cultural cognition, to suggest that humans have developed cognitive skills to assign mental states to others and then to use those states to explain and further predict the actions of others. Moreover, TOM presupposes a cognitive capability or competence and assumes that the actors we are interested in are “intentional agents”. This assumption then allows us to interpret their thoughts through the expression of beliefs, desires and emotions. An alternative view of TOM is the theory of mental simulations. This view of TOM argues that we can infer others future actions/intentions by engaging our own mind to model their emotive and cognitive states. Tomasello et al., and work involving TOM, intentionality of others and even shared intentionality driven by alliance of need is a consequence of our cognition and if so, argues for a capability that can be developed or enhanced.

Intentionality may suggest a capability, but our thinking process (and system 1 errors) and ethnocentrism will often place our attempts to “think” like them in alignment with our own mental schemas, subject to system 1 errors that are not always accurate and colored by our intuition. Rob Johnston (2005, p. 75) attributes a failure of the intelligence process to our ethnocentric tendencies and the inability to recognize the powerful influence of our own logic as we attempt to attribute meaning of behavior and actions to like-minded thinking and similar beliefs and desires.

“…the cognitive process of understanding or even recognizing that there are cultural and cognitive differences is not intuitive at all….This effort often appears doomed to failure, because, “trying to think like them” all too often results in applying the logic of one’ own culture and experience to try to understand the actions of others, without knowing that one is using the logic of one’s own culture.”

The recently published Landpower Strategy: A Clash of Wills suggests that U.S. military failures in the last 50 years rest on the inability to understand the human domain – “the physical, cultural and social environments.” Echoing Johnston, the strategy posits that “the physical insularity of the US coupled with its egalitarian ethic underpins the simplistic idea that other people are like us, or at least want to be us” (2013, p. 2). Based on differentiating cultural behaviors, Archer (in Rasmussen et al., 2010) sees the initial perspective or view “…grounded in expectations stemming from the normal situational behavior learned within one’s own culture” (2010, p. 2). Williams (2010) writing about anthropologists and fieldwork (process of elucidating information from others) states, “what is required is an ability to suspend what one assumed about a particular group or situation and open oneself up to the possibility that what is actually going on is entirely different from what one thought was going on” (2010, p. 10).

In summary, humans are designed to interpret their environment through a focusing lens or worldview, which is constructed around a system of interlocking beliefs that are the foundation for behavior, actions, and emotions. Cultural domains and systems are expressions of beliefs and operate to order human behavior. Worldviews and beliefs also define in and out groups and as such reflect an inherent ethnocentrism that can profoundly affect how others and other cultures are viewed. The ability to attribute intention and event to others can be considered a capability and is based on cultural cognition and TOM. This capability is subject to intuition and applying the beliefs and logic of one’s culture without realizing the effect of ethnocentrism and the false assumption of shared logic. Bronislaw Malinowski (2013) one of the giants of early anthropology and field work stressed that good anthropology involved “seeing life through the eyes of the native” – certainly an admirable goal and one that can bear dividends, but also one fraught with cognitive pitfalls as this paper will explore shortly. For intelligence professionals, the critical need is to defuse the impacts of the human imperative as well as the cognitive/thinking system to better be able to provide the kind of intelligence necessary and possible to comprehend the range of security.
environments. McCollough (2013) uses Sun Tzu to help recast the need to “know thy enemy” in response to the questions that have swirled around the Boston Marathon bombings. Writes McCollough, “After conducting more than 400 interrogations, as well as working with Iraqi informants, I’ve had the opportunity to see the enemy as he is, a human being with a range of motivations, loyalties and ideologies. I discovered the enemy isn’t crazy or immoral, or twisted, though his reasoning may be alien to the Western understanding of sanity and morality” (2013). Cross-cultural competence offers a set of skill-based competencies that can “interfere” with the unintended consequences of our cognition, biology and cultural arrogance.

**Cross-Cultural Competence**

The last decade of U.S. military involvement has emphasized the sociocultural complexity that our missions and operations occur in. There seems to be twin needs, as suggested earlier, to build better relationships and partnerships with a host of foreign actors while also engaging skills to help discern meaning of behavior to better anticipate future behavior. Cross-cultural competence is a set of skill-based competencies that act to increase success in cross-cultural situations while also developing skills to enhance the understanding of foreign cultures. More to the point, engaging in cross-cultural competence that includes acquiring and applying cultural and region knowledge through appropriate lenses is instrumental in preparing for present and future intelligence mission paradigms.

Cross-cultural competence is the ability to navigate in complex interpersonal and cross-cultural situations, interpret or express ideas/concepts across worldviews and cultural divides, and to make sense of foreign behavior. Possessing and using knowledge and skill-based interpersonal competencies both influences and facilitates successful cross-cultural relationships, and promotes the ability to discern meaningful behavior, as well as providing context to help interpret past events and gauge potentiality of future events/behaviors (Sands & Haines, 2013)

Cross-cultural competence research and learning programs exist across the DoD. Cross-cultural competence is now being institutionalized in military education and training in the DoD. Research has identified core sets of competencies that are now being validated. DoD language and region policy has identified four of this core set that have been incorporated as requirements in all services and selected civilian populations. This paper suggests that the application of this core set to thinking differently is critical. Cross-cultural competence will aid in mitigating system 1 errors and support successful system 2 thinking. It will also provide access to sociocultural knowledge that will help in alternative analysis and in promoting sensemaking. Cross-cultural competence will also work to provide access to others’ perspective to ascertain state of mind, intention, and meaning of behavior. In essence, cross-cultural competence will mitigate elements of the human imperative that act to constrain analysis, and perhaps most importantly will make us aware of our most deepest-held beliefs that can lead us to the likelihood of error in our thinking process. Additional cross-cultural competencies can facilitate successful interactions across cultural boundaries useful for intelligence professionals who deploy or take assignments in foreign countries to engage in collection or work in partnership capacity.

There have been several efforts to distill and delineate core competencies (i.e. Rentch et al., 2007; Abbe, 2008; Abbe et al., 2007; Ross, 2008; Ross & Thorsen, 2008; Rasmussen et al., 2009; Mclosky et al., 2010A; Mclosky et al., 2010b; Rasmussen & Sieck, 2012; Reid et al., 2012; Sands, 2012, 2013; Sands & Haines, 2013). Cross-cultural competence for the purposes of this paper and the intelligence community is composed of the following competencies (adapted from Reid et al., 2012; Sands & Haines, 2013; research done in support of the IC’s Culture Regional Knowledge Expert Group (CRKEG)):

**Cultural self-awareness** – having cognitive awareness of your worldview and belief and value system,
and biases that follow, and awareness of influence on others, and engaging self-regulation, when appropriate.

Skill-based competencies:

- Understands self in a cultural context
- Understands the factors that shape one’s worldview
- Understands self in a cross-cultural context
- Understands the existence of cognitive and cultural biases and the need to manage them with respect to

**Cultural learning**—utilizing learning/acquiring processes to gain important culture and regional general knowledge, general cultural and regional knowledge. Learning may include text research, observation, and other knowledge gathering methods utilized by social scientists and also consider identification of sources

Skill-based competencies:

- Acquires cultural knowledge
- Learns through observation
- Learns the rules about survival language and expressing nonverbal behaviors; sociolinguistics

**Perspective-taking**—ability to take alternative perspectives and be able to “see or even feel” others’ behavior in the frame of that person’s culture (belief and value system). Perspective-taking requires insight into others’ thoughts, motivations, and concerns — “…ultimately insight into the mental model and factors that shape and affects decision making processes within specific contexts” (Rasmussen et al., 2009, p. 4). Perspective-taking allows the opportunity to understand cultural behaviors of those from a different culture within the worldview and belief system of that culture. Engaging perspective-taking promotes anticipation of behavior or reactions of others within their cultural context. McClosky et al., (2010a) discovered that increasing awareness of biases will increase the accuracy of perspective-taking.

Skill-based competencies:

- Recognizes existence of other worldviews
- Develops cultural explanations of self and others’ behaviors
- Comprehends self-worldview
- Recognize cross-cultural mental models
- Refines cultural scripts based on cross-cultural mental models
- Develops skills to promote an individual to transfer knowledge to novel situations
- Develops cultural scripts based on cross-cultural mental models
- Suspends judgment

**Cultural sensemaking**—the ability to make sense of foreign cultural behavior in a variety of contexts. Rasmussen et al (2010) define cultural sensemaking as processes that people engage to “…make sense of and explain “culturally different behaviors” (2010, p. 2). Sensemaking and mindfulness are critical enablers for cultural sensemaking. Moore’s and others conceptualization of sensemaking from an intelligence perspective generally refers to its skills of making connections, gaining understanding of necessary and relevant parts and “promoting situational awareness in situations of uncertainty” (Stefik in Moore, 2011, p. xxxv). Cultural sensemaking engages in thinking that will require moving outside of worldviews and beliefs systems (and resident cultural models) to discern meaning of behavior in cultural contexts that may institute feelings of surprise, novelty, uniqueness leading to resistance and
misunderstanding. Cultural sensemaking is the process by which understanding and meaning is derived. In concert with perspective-taking, cultural sensemaking will facilitate understanding of foreign cultures and their individuals’ behavior that concern specifically and more generally behavior that falls outside the traditional intelligence awareness.

An example of developing cultural sensemaking capability is Rasmussen et al., (2010) model of decision making that promotes development of cultural sensemaking through connecting “metacognitive skills to region-specific knowledge” (2010, p. 1). Providing people with knowledge of what influences decision-making of those from different cultures within a specific context while also providing or strengthening the competencies will help them apply that specific frame to novel and more complex “real-life” situations encountered (2010, p. 9). Here, discerning influence will depend on ascertaining and understanding the array and role of beliefs that motivate those decision-making behaviors.

Skill-based competencies

- Provide cultural explanations of self and others’ behaviors
- Promote complex decision-making that incorporate the uncertainty of future events
- Provide cultural explanations of self and others’ behaviors

Knowing a foreign language can enhance cross-cultural competence, from the ability to translate/understand source documents as means to acquire meaning from content to promote a more complex understanding of cultural behavior and underlying belief systems. For those having to interact in foreign cultures, language and the competency to communicate effectively across cultural boundaries is necessary. Cross-cultural competence also includes skills that promote successful cross-cultural communication.

**Cross (Inter) Cultural Interaction** – the ability to effectively communicate through a variety of communication channels and events with those from foreign cultures and promote successful cross-cultural relationships.

Skill-based competencies

- Develops self-monitoring skills
- Develops cognitive complexity
- Develops nonverbal & verbal communication skills
- Develops survival language skills
- Understands the elements required for communication planning
- Develops trust building tactics

**Competencies and Enablers**

There are core enablers (attitudes and affective abilities) that complement and can enhance cross-cultural competence. These enablers can be considered to be part of a collection of thoughts, feeling and behaviors of an individual’s personality and can be considered to be traits and states. Personality traits are considered mostly stable and “are relatively enduring general characteristics [enduring patterns of behavior]…consistent across situations” while states seem to momentary or “transient experiences that can change quickly from moment to moment (Grawitch, 2013). Traits will differ across individuals and cross-cultural psychology considers how traits may be aligned with cultures and are grouped in what most behavioral scientists would consider the “Big Five”: neuroticism, extraversion, openness to experience, agreeableness and conscientiousness. The bottom-line here is that enablers can prominently enhance and
amplify (or if not present can impede) cross-cultural competence and have been identified through various studies (McClosky et al., 2010a and 2010b; Reid et al., 2012; DEOMI/DoD culture.org). From an intelligence perspective, Moore (2002) attends to competencies for intelligence analysis and builds a collection of knowledge, skills and abilities (KSAs) and levels of competence that apply to analysis “performance”. Moore establishes minimum competencies for each analysis and maps the competencies to the four types of analysis: descriptive, explanatory, interpretative, and estimative. The latter two types of analysis in addition to KSAs Moore include “analyst characteristics” which may be considered enablers.

This paper does not consider the development of enablers in promoting cross-cultural competence other than this brief section. There are ongoing projects in the DoD that consider the role of enablers, however, as this paper represents one of the first cuts toward developing 3C in intelligence professionals, looking at the role and possible development of enablers should be one of the critical next steps. Office of Department of National Intelligence (ODNI) is presently undergoing a rewrite of IC competency directories and one of those directories pertains to foreign language. A subset under this directory is one based on regional expertise and culture and includes baseline competencies such as perspective-taking, cultural self-awareness and learning.

The Emic and Etic of Perspective-Taking

As suggested in this paper, thinking differently requires minimizing the influence of existing mental and cultural schemas and the consequences of system errors. Perhaps the most important of cross-cultural competencies to minimizing system errors are perspective-taking and cultural sensemaking which work to mitigate the effects of cognition errors when working across cultures. Discerning the meaning of others’ behavior requires discerning states of mind, intention, and emotion. Reframing/modifying or generating new schemas take on added complications when mind, intention and emotion of those from different cultures are predicated on worldviews and belief systems that are contrary to the intelligence professional and follow no existing (internal to the intelligence professional) cultural logic. For anthropologist and one of the first ethnographers, Bronislaw Malinowski, perspective-taking was “seeing culture through the eyes of the native”. Getting to that place and space is the topic of this section.

Crossing over or working through existing schemas to try to unravel the cultural logic of foreign cultures and individuals requires mediating the dichotomy of insider versus outsider. In the case of thinking differently, this dichotomy references the ability to get at mind, intent, and emotion of others while still being capable of applying that perspective more generally in broader, comparative and methodological terms. Elsewhere this has been labeled as methodological cultural relativism (Sands, 2012), suspending judgment while understanding the behavior of others through their cultural framework. Sands (2012) used the fieldwork method of anthropologists, ethnography, as a model for cross-cultural competence and this section will continue that application. Early formative anthropologists such as Bronislaw Malinowski, E.E. Evans-Pritchard, and James Frazier approached their fieldwork as objectively reconstructing the “native’s culture” and treated their fieldwork as taking place in a social laboratory. Their intent lay well beyond just “insider” description but to a larger purpose of a comparative science to help construct general theory of humankind.[vi]

What constitutes data, the form of that data and how accurate or valid the data is contribute to the usefulness of perspective-taking. Anthropology has framed the insider/outsider dichotomy in terms of linguistically-derived concepts emic and etic and this distinction can facilitate a more useful conceptualization of what is involved in perspective-taking. Pike (1967) borrowed these concepts from components of language, specifically phonemic and phonetic, where phoneme refers to a unit of distinct sound and phonetic units represent the signs/symbols applied to sounds for study and comparison. Pike’s utilization of the phonemic/phonetic perspective produced the emic /etic distinction, “etic viewpoint
studies behaviors as from outside of a particular system [culture] while emic viewpoint results from studying behavior as from inside the system” (1967, p. 37 in McCutcheon, 1999). The emic perspective is striving to describe a specific culture in its own terms from the insider’s self-understanding, and an etic view is adopted by comparative researchers who tend to describe differences across cultures tied to a general, external standard (Morris, 1999). One important caveat to this distinction which is of primary importance for conceptualizing the two terms (and behaviors implied) is the attribution of the end result of an emic perspective as an insider’s view – there remains the difference between “insider” and the fieldworker. The insider usually has no interest in taking the inside information to apply to an etic viewpoint, while the outsider’s mission is just that. The emic perspective becomes “localized” in a larger process with an end goal much different than an insider’s need to be solely proficient to live within that culture. The outsider must not only be at a proficient level, but also to translate that proficiency into data useable in an etic formulation. Proficiency will always be a barometer of truthfulness and validity of perspective. Unless the intelligence professional is either a cultural native or has spent sufficient time in that culture, or has a chance to collect field data, how the “insider’s perspective” was obtained and the validity of it is crucial to its use.

In short, an emic description is that which is meaningful to one from that culture and can only be supplied from a cultural resident (pulled from a specific culture by those within that culture). “Emic accounts describe thoughts and actions primarily in terms of the actor’s self-understanding – terms that are often culturally and historically-bound (Morris et al 1999:782).” An etic description is the description of cultural behavior by an outside observer/social scientist of cultural behavior that can then be used to compare across human cultures. An etic version in its most ideal form is a neutral rendering of the observer, stripped of ethnocentrism, any western bias or political or social agendas. It also assumes that levels of interpretation have been reconciled within the observer.

In anthropology, one of the primary disciplines that promotes “naturalistic” field study, there is an academic-wide dialogue on whether there can ever be a truly emic perspective, one driven by the need to objectively characterize a culture as a collective set of beliefs and values and shared cultural systems.[vii] First, a cultural reality to many anthropologists and other social scientists is composed of an array of individuals and groups within the larger frame of culture, and thus resistant to forms of scientific representation. Secondly, the impact/influence of the anthropologist/fieldworker, through bias, interpretation, situation and agenda, and the problems of reflexivity conspire to produce only valid descriptions of individual’s perspectives and only at a given moment. In essence, the fieldwork captures at best a multi-authored narrative of reality and one resistant to a scientific approach and thus the analytic approaches needed in the intelligence process. In fact, true validity of an emic perspective can only be ascertained through final authority of the native. This does beg the question is the native conscious of all reasons for holding beliefs and acting on them and secondly, what to make of differences between cultural members or between members and the fieldworker. Can one posit there is a valid and accurate cultural reality that can serve as a foundation to make more general claims of awareness and understanding about a culture, let alone utilize this reality in prediction and forecast?

Anthropologists Clifford Geertz (1973) and Marvin Harris (1979) may uniquely hold the key to answering that question. Thinking differently allows entrance to understanding beliefs and values that act as prime motivators for behaviors. An emic view as so far described tries to produce an authentic view of the world through a cultural insider’s perspective. This is gained through any number of fieldwork methods; most utilize eliciting data or information from cultural members. However, individual members may produce a variation of meaning. To Geertz, perspective becomes a quest for meaning that can only be observed as a public representation, “man is an animal suspended in webs of significance he himself has spun. I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law
but an interpretive one in search of meaning” (Geertz, 1973, p. 5).

Up to this point, we have modeled cognition as a process/behavior to understand the world around us. In essence, our mind functions as its systems respond to what we take in as information. For an intelligence professional, managing the consequences of those systems involves competencies and skills.

Interpretation of what is applied to our schemas becomes both one of those consequences and one of those skills, and crucial to what follows in terms of response/behavior. If culture can only be approached and perceived in terms of public meaning, then interpretation of that meaning, and more importantly, cultural reality, involves squaring individual representations/meaning with a collective interpretation. For this, Geertz posits the notion of thick description as cultural meaning that only comes out in context and through a collusion of cultural members. A multitude of researchers study the same topics and with similar “data” come up with readings that build up one on top of another (Geertz, 1973, p. 25). The more members elicited, the more valid the data becomes as a means of validating cultural reality to those being interviewed (triangulation discounting variation within the population). In essence, at best, according to Geertz’s view, what comes back to the intelligence professional is a multi-layered narrative of more or less an emic perspective that considers different views of reality, including the author as complier of all the perspectives gathered.

Before we gather too much steam, let us return to the potential of an etic determination of that cultural reality. Marvin Harris (1979) considers the role of that insider’s perspective useful only if its role is providing a more “scientific” or generalized theory that can be speak to need and focus and illuminate an array and motivator of behaviors. This then characterizes the dichotomy of emic and etic, of Geertz and Harris – what to do, or can be done, with the insider’s perspective. To Harris, and even to the intelligence professional, to consider only an emic perspective results in more or less verifying indigenous substantiations and what they might mean by beliefs or actions. This leaves the intelligence professional short of deriving deeper and more useful explanations for reasons of why the cultural insiders act or think the way they do – driving toward general understanding of what motivates behavior, beyond just a description of meaning of behavior is critical. The end state does not become that description of reality, or a choir of voices referencing multiple realities. The end goal is to understand what generates and motivates cultural actors, and an emic “bias” of description versus more general comparative analysis may hinder that effort.

Thus, what drove the inquiry in the first place may drive how much of either/or emic and etic is necessary. Explicating meaning of cultural behavior is dependent on acquiring description and interpretation from those from the local culture as well as being able to do good social science to determine accuracy and validity. Thinking differently and perspective taking requires both an emic and etic approach. The need to consider “voice”, the power and danger of interpretation, and what actually is considered by “insider” or a “native” perspective is important if the assumption is that perspective-taking is a critical skill-based competency to support thinking differently and a more relevant intelligence process. At the end of the day, there still can be a relevant and useful insider or emic perspective to consider.

Alternative analysis and even more so thinking differently can better be served by approaching the study of culture as a “positivistic” endeavor (Sands, 2008) and thus one that will also need to utilize the etic view. Studies of populations can yield general statements of cultural reality that can be beneficial in understanding cultural members and useful in promoting precision in analysis. Williams (2010) writing about sociocultural fieldwork as part of the Human Terrain Teams in Afghanistan sees the goal of eliciting information from strangers while doing fieldwork, based on thick description not as “the prediction of future events but the enlargement of the universe of human discourse” (2010, p. 17). This approach would combine an insider’s cultural reality and a more objective comparative view of that reality. “For example,
it has been argued that an emic approach serves best in exploratory research, whereas an etic approach serves best in testing hypotheses” (e.g., Greenfield, 1996 in Morris, 1999, p. 783). A blended emic/etic perspective mitigates/controls system 1 errors that derive from cognitive biases and engages cross-cultural competence to open the analyst’s aperture to the potential foundational discrepancy of competing and or contrary belief systems and values that undermine any sense of ultimate objectivity by the analyst.

“Simply put, for Harris, etic or analytic scholarship is not constrained by the way in which the people we study say they act or think. Instead, it is constrained by the rules that comprise rational, comparative, scientific analysis” (McCutcheon, 1999). McCollough (2013) writes, as if reinforcing such a blended perspective, “…we must see the enemy for what he is – a rational, calculating human who fights for a variety of reasons. Whatever his reasons, they are justified in his own mind.”

In brief, fieldwork offers advantages not available to a desk-bound intelligence professional or even a limited time of duration collector, yet can offer. Time in the field immersed as an insider with opportunity to participate and observe can promote more faithful renderings of cultural reality through eliciting data from cultural members and being able to participate in cultural events and activities to promote cultural proficiency (Sands, 1999, 2002). The emic/etic distinction applies most readily to collectors and fieldworkers. However, there is a plethora of open-sources material accessible to those not in the field, much of it first and third persona narrative that can be quite effective for discerning an emic or insider’s perspective. This distinction should also be a consideration of analysts and other professionals as they work toward doing perspective-taking and applying cultural sensemaking to elicit meaning of foreign cultural behavior. Adopting positivism in this regard can in the end promote a greater clarity of perspective to those in the human domain,

Cultural Priming

Lacking first-hand knowledge or “natural” experiences can restrict insider capability, but as Flynn et al., (2013) and Puls (2011) suggest time and effort are both critical variables to utilize to help provide intelligence professionals with knowledge about cultures. Developing perspective-taking and cultural sensemaking skills can be beneficial to mediating emic versus etic orientations. One potential method to promote perspective-taking is cultural priming. Cultural priming theory posits that psychological stimuli or conditions can change an individual’s response to a later stimulus. Tools (cognitive primes or conditions) can be developed to prepare or “prime” an individual to think, act, or behave in a way consistent with expectations of an individual from another culture or cultural group (Dien et al., 2012). Successful priming can be engaged through an individual’s own volition, or provided through an external agency.

Generally, the priming process involves honest evaluation of one’s experience in the target culture. Research has indicated cognitive differences in thought patterns exist between cultural members. The trick is to get the one being primed to engage in the actual thought patterns of that target culture, either through meaningful and actual experience of the individual or through an exercise/cognitive stimuli which reflects the cultural models of the target culture. The next step is to identify/apply a trigger while clearing other cultural influence of the individual’s culture that might intercede in the priming experience. Triggers could be based on extended and/or immersive experiences in the target culture by the analysts – the more emotionally (even sensory) evocative, the more compelling the trigger. The trigger can also be as simple as a piece of text or narrative which influences perspective based on priming needs. While activating the trigger, mitigating direct or indirect associations inherent in the analyst’s culture is beneficial to how well the prime will work. This could be as easy as moving into neutral or culturally distinct environment, another room, a cafeteria, an eatery that features a menu from that country/culture, etc. It is also critical that the trigger and task that needs to be completed be in the format that strips or as much as can be
facilitated minimizes the cultural or tradecraft “formatting” of the analyst (i.e. PowerPoint, structured analytical methods or collaboration, etc).

It is here that mindfulness be considered, as Moore and as others have called out as important in sensemaking. Being in the “moment” when undergoing a priming event is essential to cutting off contaminating influences of an array of system 1 errors. Depending on length of task, the priming experience may be revisited with multiple activations. The concluding step is to evaluate the results of the task and the utility of the priming experience. This involves the application of the measured and reflective operation of system 2. Thinking about the thinking and priming process is important to continued success of priming. Essentially these primes can aid in the process of reframing context to cultural sensemaking and also facilitate perspective-taking. Skillfully applying cultural priming cues, intelligence officers may better estimate the effects of actions and events of others from a different culture – getting the assessment “left of bang”. There is an additional wrinkle associated with priming that must be considered; adopting the mindset and thinking like those from foreign cultures also means inheriting the biases that accompany that perspective.

University of Maryland’s Center for Advanced Study of Language (CASL) is currently involved in a cultural priming study and has application to successful cross-cultural relationship building, effective cross-cultural collection skill development, and discerning and estimating future behavior of foreign cultures. This research first explores the range of potential cultural characterizations usually assigned to a dual frame of individualist/collectivist. Preliminary research implicates the “individualist/collectivist” dichotomy that is usually applied to characterize western and non-western societies may be more nuanced than what has been commonly accepted in the literature (Hamedani et al., 2012; Fiske, 2002, 2004). Suggesting that the “collectivist” category may engender different cultural perspectives, researchers proposed a multidimensional cultural frame that is based around the arrangement of social relationships. Second, determined through validation of these frames and supported by neuroimaging tests on four different cultural groups, a prime is proposed for development in the next phase to be used by analysts to adopt the appropriate collectivist mindset in the workplace to help better predict behaviors of those in cultures that promote such a mindset, i.e., East and South Asian cultures.

Priming can easily work the other way and produce unconscious effects, thoughts, ideas and emotions through an association with past events that one is not aware (Kahneman, 2011). Even more, an idea by itself or just simple gestures can influence behavior, “…primed ideas have some ability to prime other ideas….Like ripples on a pond, activation spreads through a small part of the vast network of associated ideas” (2011, p. 53). Priming occurs in System 1 and the thinking part of System 2 has no access to the activation of its effect. Thus, although priming can promote perspective-taking through conscious manipulation, it also plays havoc on our System 2 deliberations, “studies of priming effects have yielded discoveries that threaten our self-image as conscious and autonomous authors of our judgments and our choices” (2011, p. 55).

The development of cross-cultural competence centers on four baseline competencies (in addition to the skills and strategies that facilitate more successful cross-cultural interactions), however, a multitude of studies and extensive research in and outside the DoD have identified a suite of supporting competencies and enablers that will act to promote a more accelerated and sustainable development of cross-cultural competence. It is not surprising that there are personality traits and states that can either enhance cross-cultural competence development or hinder its progress and some like empathy, ambiguity, acceptance of lack of closure, self-regulation, motivation to learn and others have direct implication on one’s cross-cultural competence. Moore (2002) identified core competencies essential for analysts and some of the supporting competencies have also been identified to support cross-cultural competence. However, as
research has indicated, learning programs have been developed and DoD has reiterated in policy, the competencies identified as critical for cross-cultural competence align with those delineated in this paper.

**Learning to Think Differently**

The shifting, fluid and “fundamentally transforming” transnational environment as we have made the case throughout this paper prompts the need to develop knowledge, skills and strategies to **think differently**. The same contemporary and future environment also demands the development and sustainment of “astute, mentally agile, flexible and cosmopolitan intelligence professionals (Haines, 2013WP).” Identifying the skill-based competencies necessary for thinking differently as well as promoting thinking strategies such as critical thinking and alternative analysis (and methods) is one step, building a learning program that can build on academic and experiential background of incoming, and already resident intelligence professionals to promote thinking differently is equally if not more important. Science, technology, Engineering and Mathematics (STEM) programs may be important to promoting a more competitive US society in the global marketplace, but it is also important to acknowledge that incoming intelligence professionals may also matriculate through the American, even Western educational systems deficient in components that can enhance thinking differently and germane to this last section, cross-cultural competence. These deficient knowledge and skills include qualitative and quantitative critical thinking skills, second language acquisition, critical and applied regional studies understanding, and appreciation of region and culture-general concepts.

How to rectify and develop learning programs for thinking differently demands a re-envisioning of the learning process for intelligence professionals and need to deconflict while synergizing the training, education and workforce development landscape. “Essential to cognitive flexibility, agility, and diversity –all considered within the contemporary rubric of critical thinking critically and differently is recognizing the need to change the form, format, content and delivery of training and education as is done today” (Haines, 2013WP). Frerichs and Di Rienzo (2011) argue similarly, “The goal of intelligence education and training is to produce individuals who can creatively explore, describe, and or explain the intelligence issues or problems (accurately)” (2011, p. 69).

It is apparent that managing our thinking process while utilizing an array of thinking strategies involves a lifelong learning program, advancing this attainment and sustainment as a function of existing training and education programs misses the mark on what is needed. Essential to cognitive flexibility, agility, and diversity –all considered within the contemporary rubric of critical thinking critically and differently – is recognizing the need to change the form, format, content and delivery of training and education as is done today. Training at its essence must effectively facilitate acquiring skills while adapting to and applying technologies to perform tasks. Successful training must then be blended with the educational precepts of acquiring information, processing that information and consequently producing that information as understanding. However, to this paper, the missing link is the ability to not only manage the workings of human cognition but to foundational alter and direct, and at times step out of perspectives that run counter and contrary to our powerful and influential worldviews and belief systems while culturally making sense of that perspective. This involves working in and out of the moment and engaging self-awareness and openness to the type of reflexive learning that is foreign and contrary to existing structured analysis. Current education and training programs in academia and in the intelligence community (in their current perspective of what education and training does and how it is constructed) fail to address this need. Developing new educational technologies is not the answer, but it could be a means.

For starters, curriculum must expand and integrate traditional complexities that encourage creativity, accepts ‘failure’, while acknowledging flexibility and agility in a framework against the dynamic environment of the future. Curriculum should be problem solving, collaborative, and allowed to follow
paths and directions that may only initially be tangential. Discussion should be featured prominently and student - participative and student- led and guided by a “trained” facilitator. The goal should not be to teach the students the “right” way but to provide to them the art of the possible. The cadre must know how to set up the event, nurture it, but stay comfortably away from leading the learning. Curriculum and classes must be designed for ‘mastery’; they must be individualized, customizable and adaptive. Classes are to be modularized and not be developed, or considered time-bound. Research indicates the most effective learning periods do not exceed 20 minutes. Classes and content learning can be structured around those periods, and when individualized and computer delivered, individuals learn at their own pace. This type of curriculum must also be recognized as not an end-state, but the beginning. Education science recognizes that true learning takes place in the arena of novelty, uncertainty and bounded by risk; what formalized learning leads to is developing a capability.

**Foundations of Learning Program**

It is the supposition of this section that promoting and developing alternative analytical methods and cross-cultural competence may not be covered effectively in existing learning programs. To be effective as a capability, thinking differently, like alternative analysis, cannot be promoted as an enhancement or augmentation, but must be considered as an active component from the introduction of human cognition through the more specific leaning on the different array of analytical strategies and methods. In effect, the analyst is being tasked to be a structured thinker, as well as one who thinks critically, alternatively and differently. Developing separate and distinct courses in “culture” may marginalize the impact and importance of the development of a mature and effective thinker.

The overall goal of this learning program should be to introduce a model of learning that pursues quantitative and qualitative reasoning skills, critical and alternative thinking capabilities matched against relevant content and the integration of technology. Features that are not presently factored into existing intelligence training are the development of cross-cultural competence and the development of greater awareness of knowledge that considers culture and region as integral to the contemporary security landscape as general and iterative awareness but also to inform the analytic process and facilitate outcomes to include prediction/forecasting.

More specific learning goals would be:

- Introduce human cognition for analysts
- Expand and introduce cultural schemas that represent the contemporary transnational and international security landscape
  - Introduce region and culture general knowledge
- Develop an integrated instruction on a range of analyses and thinking strategies that can facilitate more effective intelligence solutions and mitigate cultural, cognitive and tradecraft system 1 errors
  - Incorporate Baseline 3C competencies into this instruction
  - Promote the development of alternative analytic methods
    - Promote red teaming, divergent thinking, brainstorming and other methods
    - Promote sociocultural analysis as part of this program
- Develop learning on thinking differently
  - Promote and develop perspective-taking and cultural sensemaking and incorporate methods such as cultural priming to promote more salient emic/etic perspectives
- Develop an innovative learning environment that promotes a seamless and productive integration of training, education and development programs that emphasizes lifelong learning and offers a learning space to grow professionally
Offer a range of learning methods and platforms
Promote a model that features instructor-directed, self-paced and collaborative learning opportunities

**Cultural Components of a Thinking Differently Learning Program**

Cultural components of learning program should consider these features: foundational culture and region knowledge, procedural cross-cultural competence knowledge and application of that knowledge, and what can be termed region (culture)-specific knowledge, and the appropriate sequencing, application and delivery of the learning program.

*Cultural (general) knowledge* (declarative) is the basis by which the behavior of a defined group of people is better and more accurately understood. Human behavior is predicated on and reflected in a system of shared beliefs and values, and is expressed through domains of activities. Beliefs are ideas that are held to be true by a society; values are shared beliefs that are meaningful judgments of personal attributes and reinforcement of qualities important to group members. These beliefs, values and behaviors are learned and shared across generations. Culture is more or less an organizing concept or process that generates and sustains human behavior. Cultural knowledge helps to understand the ‘contextual’ why behind a group’s behavior by discerning the formation and sustainment of those beliefs and values.

Cultural knowledge provides the basic understanding of the common aspects and domains based on shared meaning of behavior that offers broadly-applicable general principles and helps serve as a framework to establish a group’s identity. Included in cultural knowledge is the understanding of how cultural systems are integrated and how those systems operate across time and space. This perspective views culture as foundational to all human behavior – as a means to organize and motivate behavior and as a means to define or draw behavioral boundaries around groups of people.

*Regional knowledge* (declarative) includes the measurable or observed elements of a geographically defined region or nation-state that enables, constrains, or impacts the range of human behavior. The expression of regional knowledge (i.e., governance and economic systems, belief systems, language, technology, systems of affiliation, cultural heritage, development, and security) considers a range of categories: a nation-state, collection of nation-states, non-state actors, or cultural and ethnic groups—the boundaries around a region can be determined by mission or focus. Regional knowledge contextualizes cultural general concepts to place and space. Contemporary transnational threats stretch the limits of traditional national and *geoethnic* borders. Region will also include virtual communities of interest that transcend geographical borders. However, borders and boundaries will continue to play an important role in promoting identity and offering safe havens.

*Cross-cultural competence* as has been outlined is suite of five skill-based competencies, four of which comprise the Baseline and one that engages cross (intercultural) communication strategies and skills. There also is the consideration of supporting “enablers” that can be important to how engaged and skillful the individual is in 3C. Introducing these competencies (and enablers) in a learning program would include the presentation of concepts and process of engaging the competencies (declarative and procedural knowledge). Development and application of competencies would be accomplished through sets of student-centered and facilitated exercises/scenarios that would be integrated into the overall instruction on thinking differently. For intelligence collectors, the baseline and especially cross (intercultural) communication would be critical to mission success.

*Sociocultural analysis (and methods)* is an array of methods used to discern meaning of behavior through data that traditionally was undervalued and did not play a major role in traditional analysis (Sands & Haines, 2013). Critical to the contemporary security landscape, the culture and regional knowledge
provides methods to extract/mine this kind of data and data sets that should be considered as traditional state-actors are joined on the landscape by individuals and cultural groups that are motivated by intrinsic beliefs and values expressed through cultural domains and systems.

Beyond analysts, there is an array of qualitative extraction methods that can be important to providing accurate and true-to-the reality/perspective of those from a foreign culture that can provide useful data. As suggested earlier, not just the baseline competencies can facilitate successful collection, but the development of cross (intercultural) communication strategies and skills is critical to facilitating successful and enduring relationships with human resources “on the ground” and elsewhere to promote data exchange. As anthropologists and others involved in naturalistic field work confront issues of interpretation, filters, and biases (think Malinowski), intelligence collectors will also need cross-cultural competence, especially perspective-taking, cultural sensemaking and cross-cultural communication competence.

The Learning Experience

This paper concludes with a proposed learning experience based on the concepts and principles of learning elaborated on earlier. What will drive this learning experience is arguing against the assertion that thinking differently can be presented as thinking additionally. Since much of what will be considered as KSAs are “culture-related”, the recent DoD experience in promoting culture in training and education offers a history of how not to incorporate these subjects into training and education programs that will be sustainable. Immediacy of OIF and OEF mission prompted surface training on culture-specific “survival” facts and cultural etiquette along with survival languages and was delivered in brief command briefings presented through PowerPoint or in small groups with little or no theory supporting the pedagogy. Services also developed short and succinct country field guides or Smart Books to aid cultural understanding and Mobile Training Teams (MTTS) crisscrossed the country delivering these culture presentations. Cross-cultural competence has only recently been incorporated into training and education in the DoD. This awareness (and no better level of comprehension, let alone application) of culture-related topics have only recently become institutionalized in more lasting and deeper learning programs, such as PME instruction and shorter duration courses. Appending culture to existing instruction and courseware as add-ons or disconnected from curriculum that features relevant topics such as strategy, leadership, regional studies, etc does not promote a synergy that is necessary. There have been some promising pedagogical experiments in combining language and culture in curriculum (Sands 2013a). The suggestion of this paper is thinking differently, like critical thinking and alternative analysis, should be folded into a learning experience that considers human cognition, thinking and analysis in one or multiple coordinated and/or sequenced curricula. Once culture is divorced from the learning goals and objectives of the primary task of providing analysts (and collectors) a learning program on how to think like successful intelligence professionals, the synergy and the import of those KSAs become marginalized in the learner’s mind as well.

The learning program should be a blended/hybrid experience with a focus on moving seamlessly from acquisition of declarative and procedural knowledge to student-centered facilitated exercises and independent learning activities that engage structured “convergent” thinking and analysis and reflective non-structured thinking. This latter kind of thinking engages as an outcome incorporating those concepts introduced in this paper: competences such as perspective-taking, cultural sensemaking and self-awareness, meaningfulness and searching for cultural patterns of behavior that can only be derived and connected through non-directed pursuit of knowledge. There should be a mixture of facilitation and learning styles: instructor-led, facilitated and guided, and self-paced. There is a double realization suggested here, one that thinking differently is itself not an addition to an already existing thinking
strategy and two, as human cognition is a function of cognitive systems, all kinds of thinking are only as useful and productive as that which considers how this system works and its unintended consequences. In essence, the security landscape has dramatically changed and become more complex, convoluted, uncertain and random. The learning program should as well reflect in its design and goals/objectives this currency. There should be multiple assessments considered. The learning experience this paper represents an entry-level and in-depth program given to incoming intelligence personnel.

The course structure and learning goals for **Discerning Thinking Strategies for the Intelligence Professional** would include the following high level learning goals (see appendix for a more detailed look at learning objectives).

**Introduction - The Contemporary Transnational Landscape**
- Describe the need to think differently

**Navigating Culture**
- Describe the relationship between worldviews, beliefs and values and the influence of each on behavior

**Thinking**
- Explain the mechanics of human cognition
- Intuition, Bias Formation and the Nature of Prediction/Forecasting
- The human imperative and cross-cultural competence – competencies for debugging unintended consequences

**Thinking Critically**
- Describe the conventional analytic process
- Describe critical thinking and alternative analysis methods/techniques to support the intelligence community and process in formulating forecasting capabilities
- Sociocultural analysis

**Thinking Differently**
- Overcoming the Human Imperative
- Creating non-structured thinking space
- Engaging 3C
- methods to promote perspective-taking=cultural priming

The suggestion is that elements of culture and region general should also be introduced during or parallel to learning experience on thinking to better facilitate active knowledge transfer of culture and region general as it enhances application to thinking differently.

**Conclusion**

The central tenet of this paper is that there is a need for articulating skill-based cross-cultural competencies with current analysis to promote a more effective understanding of the contemporary transnational security landscape, more specifically to approach and work within the **human domain**. This need also includes the capability to discern meaning of actions and activities of those non-traditional actors in this domain and lend some credence to the act of prediction and forecasting. To this end, this paper explored a model of how human cognition operates and the development of models/schemas and the
biases that are unintended consequences of the evolution of the mind. Schemas and intuitions work fine in known and repeated environments with recognized and limited actors, as system 1 errors are controlled by the exchange of the system 1 and 2. Traditional and structured linear analysis leading to disaggregating constituent elements and then driving to a convergent prediction can produce adequate responses and support prediction. Alternative analysis can add diversity of options to consider in the analytic process. However, due to the nature of contemporary transnational security environment and human that includes: fluid and randomness of non-state actors; lack of awareness of critical sociocultural factors, including understanding of foundational belief and value systems of cultural groups and the systems’ influence on motivating behavior; deep-seated cultural bias that can restrict perspective-taking and produce ultimately erroneous predictions, and other reasons, alternative analysis may not add value to the intelligence process. Sensemaking and mindfulness are two skill-based competences that can provide a bridge to more accurate or valid understanding of others’ behavior, however, to really get at what others’ are thinking, feeling and desiring one must engage thinking differently.

Cross-cultural competence was introduced as a collection of further skill-based competencies that when engaged can provide means to aid in mitigating cognitive and cultural biases, promote more effective use of a range of cultural/regional knowledge, promote more nuanced cultural sensemaking to better achieve an active understanding of foreign cultural behavior and when coupled with mindfulness and techniques like cultural priming can enhance and sustain processes to think outside both structured/convergent analytical pathways. Utilizing cross-cultural competence can activate a learning environment that promotes self-reflection and an openness to understand and then accurately model cultural reality that often is contrary or contradictory to that held by the analyst. A program was introduced that detailed goals and high-level objectives to a learning program that explores thinking differently and applying cross-cultural competence.

References


______. (2013). Black and White and Red All over: How the hypekinetic media is breeding a new generation of terrorists. Foreign Policy (April 22), http://www.foreignpolicy.com/articles/2013/04/22/black_and_white_and_red_all_over_boston_bombing_terrorists_media


Tomasello, M., Carpenter, M., Call, J., Behne, T., & Moll, H. (2005). Understanding and sharing


End Notes

[i] The author would like to acknowledge the thoughtful comments provided by Thomas Haines, Mark Dye and Allison Greene-Sands on draft copies of this paper. Thanks also to Jessica DeVisser for her editing efforts.

[ii] There are other examples in human cognition where this thinking process has promoted specific and unique behaviors. Studies by cognitive anthropologists Scott Atran (2002), *In Gods We Trust: The Evolutionary Landscape of Religion* and Atran and Douglas Medin (2010), *The Native Mind and the Cultural Construction of Nature* (Life and Mind: Philosophical Issues in Biology and Psychology), and Pascual Boyer (2002), *Religion Explained* have suggested that System 1 thinking was critical in identifying threats in past environments and gods and other supernatural agencies are an outgrowth of threat identification transferred to new and unknown existential situations. Eugene D’Aquilla et al (1979), *The spectrum of ritual: a biogenetic structural analysis* and (1990), *Brain, symbol & experience: toward a neurophenomenology of human consciousness* suggested a “cognitive imperative” or need to address the unknown using ‘scripts” or schemas of known behavior or experience. The familiar relationships and identities in our ancestors’ experience was transposed onto the pantheon of spiritual agents and imbued with human tendencies and personalities.

[iii] See Intelligence Community Directive #203 (June 21, 2007)

[iv] There is a very robust literature on research and development of learning programs in cross-cultural competence. See the following site for a survey of research and publications: http://www.defenseculture.org/Home/index.cfm . See also Sands and Greene-Sands (in press 2013), *Culture, the Flipside of COIN: Cross-cultural Competence for a 21st century Military* for a broad and indepth look at conceptualization, application, research and learning of cross-cultural competence in the U.S. military.

[v] See Department of Defense Instruction (DODI) 5160.70 and Department of Defense Directive (DODD) 5160.41E

[vi] As of late, the discipline is in the throes of debate on whether anthropology can or should be in the business of creating and proving theories of human behavior. Trying to balance the need to derive the inside perspective while still being able to apply an objective rendering of that perspective for purposes of comparison across cultures beyond description became a theoretical stumbling block to accessing cultural reality of others for later anthropologists. This issue remains a contentious one for many in the academy who feel that anthropology cannot fulfill the latter intent.
Most anthropology done prior to the advent of post-modernism was considered scientific and yielded an etic perspective. Ironically, it was the publication of Malinowski’s personal diary (1986) kept during his fieldwork in the Trobriand Islands during World War I that finally put to the rest the myth that anthropologists were beyond their own cognitive dissonance and their array of system 1 errors. However, Malinowski’s polemic treatise on the Islanders is still considered one the classic works in early and contemporary anthropology, a descriptive and yielding publication that bears no hint of the racism, sexism and arrogance that is on display in his diary. Malinowski it seems was able to cognitively negotiate his biases to produce the etic/emic perspective in his treatment. Malinowski’s three plus years of “embedded” fieldwork can help in minimizing system 1 error, as time and experience allows modification of existing or generation of new schemas.

About the Author

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Links:

4. [http://www.foreignpolicy.com/articles/2013/04/22/black_and_white_and_red_all_over_boston_bombing_terrorists_media](http://www.foreignpolicy.com/articles/2013/04/22/black_and_white_and_red_all_over_boston_bombing_terrorists_media)
5. [http://wwwarmedforcesjournal.com/2013/01/12842318](http://wwwarmedforcesjournal.com/2013/01/12842318)
7. [http://www.slu.edu/x13437.xml](http://www.slu.edu/x13437.xml)