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P A P E R

# Military Intelligence Fusion for Complex Operations

A New Paradigm

Ben Connable

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## Preface

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This occasional paper examines how military intelligence organizations and, more broadly, the defense intelligence enterprise approach the task of all-source fusion analysis. It recommends a paradigm shift not only in the approach that the military takes to all-source fusion but also in the way that the services and U.S. Department of Defense intelligence agencies recruit, train, educate, and promote their analytic workforces.

This research was conducted within the Intelligence Policy Center of the RAND National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community.

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# Military Intelligence Fusion for Complex Operations: A New Paradigm

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When we speak of improving intelligence analysis, we are usually referring to the quality of writing, types of analytical products, relations between intelligence analysts and intelligence consumers, or organization of the analytic process. Little attention is devoted to improving how analysts think.

—Richards J. Heuer, Jr., *Psychology of Intelligence Analysis*<sup>1</sup>

Military intelligence often fails to provide commanders and policymakers with an effective understanding of complex counterinsurgency (COIN) environments. This failure stems in great part from a failure to deliver *holistic*, fused analysis.<sup>2</sup> Most analyses of complex environments are derived from a systems analysis model that artificially deconstructs both the environment and the people and groups within that environment. Treating complex environments, such as Iraq or Afghanistan, as a system that can be broken into simply labeled component parts leads analysts to make unhelpful and logically unsound assumptions regarding human identity. These assumptions, in turn, undermine analytic effectiveness. Instead of fusing available information in a way that accurately reflects the inherently complex “shades-of-gray” ground truth, military analysts—influenced by systems analysis and conventional military doctrine—often channel their thinking and efforts into three artificially color-coded categories: red, white, and green.<sup>3</sup> These colors represent, respectively, the enemy, the population, and the host nation.

Channelization of analysis by color is convenient for operators and some analysts who seek clear delineations between enemy and other groups. However, the analyses that often emerge present an artificially clear intelligence picture. Color-coding undermines at least one of the fundamental practices of intelligence analysis—analytic fusion—and one of the key objectives of intelligence analysis: analytic integrity. Color-coding also reveals an imbalance in defense intelligence between analysis of the enemy and analysis of sociocultural factors. One senior Central Intelligence Agency analyst noted, “Cultural influences are typically touched on within US Intelligence Community analyses as peripheral factors, described with passing refer-

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<sup>1</sup> Richards J., Heuer, Jr., *Psychology of Intelligence Analysis*, Washington, D.C.: Center for the Study of Intelligence, Central Intelligence Agency, 1999.

<sup>2</sup> According to U.S. doctrine, fusion is the process of collecting and examining information from all available sources and intelligence disciplines to derive an assessment of detected activity that is as complete as possible. It relies on an all-source approach to intelligence collection and analysis.

<sup>3</sup> Analysts and operators use the color blue to represent U.S. and other (non–host-nation) friendly forces.

ences, and often in general and superficial terms.”<sup>4</sup> This lip-service approach to sociocultural analysis and predisposition to red is accentuated in military intelligence because the military is predisposed to focus on enemy forces. Consequently, what military intelligence doctrine refers to as *fused analysis* tends to consist of little more than fused information on the (red) enemy. Color-coded, red-centric analyses also reinforce the inaccurate and unhelpful notion that the enemy and society are separate constructs in the COIN environment, or separate subsystems within a larger societal system.

Simplified analyses based on this conceptual approach to understanding complex environments fail to account for the fact that individuals and groups can simultaneously possess multiple conflicting identities. Particularly in a hostile, complex, and chaotic environment, people can support the government and the insurgency to varying degrees at the same time—and be similarly resentful of both. Identifying all but the unequivocally irredeemable as an “enemy” and labeling anyone wearing a government uniform as a “friend” not only creates a false paradigm of human identity, but it also artificially bounds options: enemies are killed or captured, “neutrals” are protected or ignored, and friends are given trust (and in some cases also ignored). Color-coding and systems analysis fail to provide military commanders, their staffs, and policymakers with the best or most accurate understanding of the people and groups in complex environments.

Channelization of COIN analysis through systematization and color-coding has yet to be clearly identified as a concern or adequately addressed in the context of defense intelligence. This paper offers a practical alternative organizing paradigm for the analysis of complex environments. The new paradigm would require commanders and analysts to eliminate channelization by color.<sup>5</sup> Instead of labeling people and groups, analysts would instead focus on ascertaining their intent and behavior: Hostile intent and behavior would warrant discouragement (in some cases, lethal) or enticement, while supportive intent and behavior would be rewarded. Disincentive or reward would, in turn, help shape perception and, consequently, future behavior. Operational commanders would have to subscribe to this paradigm shift because they shape the military intelligence analytic process: They tell intelligence professionals what to collect and analyze to support decisionmaking. All-source and *holistic*, fused intelligence based on this new paradigm would help commanders find ways to influence everyone—including host-nation officials—to act in ways that are conducive to mission success while helping to prevent operational and even strategic surprise.

The effects of analytic color-coding are not limited to its impact on decisionmaking in complex combat environments. Color-coding affects military service and defense intelligence enterprise (DIE) recruiting, training, and career development. Analysts working on enemy (red-force) activities appear to have many informal career advantages over those who focus on what many consider to be fuzzy or less relevant (white, or population-centric) sociocultural

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<sup>4</sup> Matthew T. Berrett, in Jeannie L. Johnson and Matthew T. Berrett, “Cultural Topography: A New Research Tool for Intelligence Analysis,” *Studies in Intelligence*, unclassified extract, Vol. 55, No. 2, June 2011.

<sup>5</sup> The suggested paradigm shift for analysis offered here differs from the one suggested by Jeffrey Cooper in his book *Curing Analytic Pathologies: Pathways to Improved Intelligence Analysis*. Cooper focuses on changing the functional and structural processes of analysis. See Jeffrey R. Cooper, *Curing Analytic Pathologies: Pathways to Improved Intelligence Analysis*, Washington, D.C.: Center for the Study of Intelligence, Central Intelligence Agency, December 2005.

issues.<sup>6</sup> The Office of the Under Secretary of Defense for Intelligence created the Defense Intelligence Socio-Cultural Capabilities Council to address analytic tradecraft and working-level organizational practices and to integrate sociocultural analysis into its all-source analytic practices. The council proposed a definition of sociocultural intelligence that would encompass all “people” in an effort to integrate sociocultural and enemy-centric intelligence into a holistic analytic approach.<sup>7</sup> Despite these efforts, the DIE has not yet found a way to effectively fuse analyses or develop a holistic all-source analytic capability in its military or civilian workforce. An alternative approach would create analysts who are trained and educated to assess the behavioral characteristics of all elements of the local population and to describe the environment through holistic, all-source fusion analysis.

## Assumptions and Definitions

The arguments presented here rest on three assumptions regarding military intelligence in complex operations, including COIN:

1. The primary purpose of military intelligence is to support the decisionmaking process of military commanders. Therefore, while operations might be driven by intelligence, operational commanders shape the intelligence collection process as much as, or perhaps more than, military intelligence leadership.
2. Intelligence community policy and military doctrine mandate the production of all-source, fused intelligence to inform decisionmakers (including commanders).
3. Keeping in mind that there are many functional or technical aspects of intelligence analysis, the ultimate “end” of all-source fusion for a military commander or policy-maker is the best-possible *holistic* explanation of an inherently complex environment based on all available, collectable, and relevant information.

These assumptions are rooted in—and, in a few cases, expand upon—national policy and military doctrine, which I explore in the following section.<sup>8</sup> While analysis is typically broken into three colors, the primary distinction lies between red and white analyses. *White analysis* could also be described as sociocultural or cultural analysis, but these are loosely defined and oft-disputed terms. It is not the purpose of this paper to resolve debates over definitions. Therefore, I refer to all population-centric analysis as *white analysis*.<sup>9</sup>

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<sup>6</sup> This is a personal, nonempirical observation based on more than ten years of experience with the military intelligence community.

<sup>7</sup> Dan Plafcan, Office of the Under Secretary of Defense for Intelligence, “OUSD(I) Socio-Cultural Analysis: Integrating Best Practices and Emerging Analytics,” briefing, June 21, 2012. Not available to the general public.

<sup>8</sup> It is important to note that there are many functions of intelligence analysis, some of which are technical or otherwise limited in scope and practice. These include route analysis, weather analysis, and the plotting of known enemy positions for tactical combat. These tasks do not necessarily require or result in any kind of holistic understanding, nor do they necessarily require consideration of a broad range of information types (e.g., information on civilians). This paper refers specifically to the development of all-source fusion analysis as described in Joint Publication 2-0 (*Joint Intelligence*) and other manuals cited herein.

<sup>9</sup> This paper does not address the issue of analytic channelization by collection type. I have observed distinct splits among signals, human, geospatial, and other types of single “INT” analyses. Resulting analyses are no more all-source or fused

*Holistic* in the context of this paper has multiple but interrelated meanings: It describes an approach to analysis that is intended to depict complex environments without artificial deconstruction, it is a way of thinking of people and groups as both interdependent and internally complex, and it is an approach that reflects best efforts to present interrelated complexity as a single (narrative) picture with imperfect and incomplete information.

## The Current Analytic Paradigm: Fusion as a Method, Not an Approach

The Director of National Intelligence mandates that analysis reflect “all relevant information that is available to the analytic element,” regardless of collection method.<sup>10</sup> This sets a requirement for all-source analytic fusion, which joint military doctrine describes as “the process of collecting and examining information from all available sources and intelligence disciplines to derive as complete an assessment as possible of detected activity.”<sup>11</sup> Joint doctrine also states that fusion “relies on an all-source *approach* to intelligence collection and analysis.”<sup>12</sup> Based on these overarching guidelines for military intelligence analysts, it seems clear that analysis should reflect both an exhaustive and balanced consideration of available and relevant information (from all sources, or INTs). However, use of the word *approach* implies a more fundamental and perhaps theoretic basis for intelligence analysis: Fusion is not only a function of analysis, but it is also a way of thinking about both the analytic problem and the analytic output. In this interpretation of *fusion*, everyone associated with the intelligence cycle would work from the proposition that collection feeds the development of a holistic analytic picture that reflects a best effort to describe both interdependent (between people and groups) and internal (within an individual or group) complexity. This proposed objective does not appear to reflect the current interpretation of fusion within the DIE.

In current practice, fusion is more of a technical method than an approach to analysis. Figure 1 depicts a simplified and notional example of the fusion process as it might be applied to identify indications and warnings of an imminent invasion across a national border. In this case, a human intelligence report indicates that civilians are fleeing the area near the most likely invasion site, open-source information shows that leaders of the nation in question outwardly profess a desire for peace, signals intercepts reveal that military officers are leaving their barracks for the front, imagery shows military units advancing on the border, a sensor picks up indications of preparations for a chemical attack, and satellite imagery shows that the water level in the river that runs along the border is low, and therefore the river would be easy to ford. Taken separately, these reports might not meet the threshold for a clear warning of attack, but when *fused* into a single cross-referenced analysis, they present a strong indication that inva-

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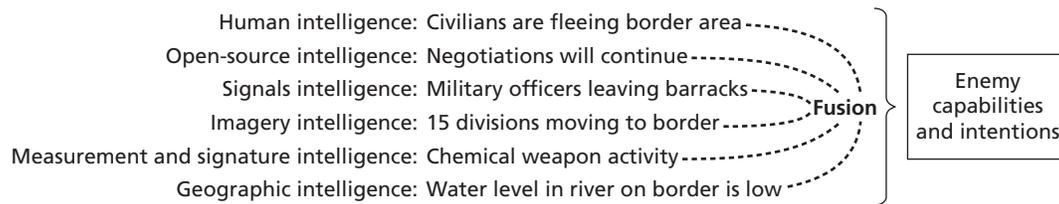
than color coded analyses. Fusing collection-specific analyses is another significant challenge for the DIE. For a more detailed discussion of this problem, see Michael T. Flynn and Charles A. Flynn, “Integrating Intelligence and Information: Ten Points for the Commander,” *Military Review*, January 2012.

<sup>10</sup> Intelligence Community Directive Number 203, *Analytic Standards*, June 21, 2007, p. 2.

<sup>11</sup> U.S. Joint Chiefs of Staff, *Joint Intelligence*, Joint Publication 2-0, Washington, D.C., June 22, 2007, p. II-11. While the Director of National Intelligence has made great strides in establishing effective standards for analysis across the intelligence community, one could argue that this definition is insufficient since it is a basic function of intelligence to determine not only behavior but also intent.

<sup>12</sup> U.S. Joint Chiefs of Staff, 2007, p. II-11; emphasis added.

**Figure 1**  
**Notional Example of the Fusion Process for Indications and Warning**



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sion is imminent and that the national leadership might be executing a deception plan in the public domain.

The notional scenario in Figure 1 presents a difficult but relatively straightforward challenge for an intelligence analyst: Either the attack is likely to occur or it is not.<sup>13</sup> Similar analysis was conducted immediately prior to Iraq's invasion of Kuwait in 1990.<sup>14</sup> For cases like this, cross-referencing a wide variety of inputs in an effort to determine ground truth makes sense. Here, *fusion* is the process of corroborating and comparing the relative value of available data and the insight they provide to deliver an analytic finding.

Approaching fusion as a technical method may be sufficient for analysis like this indications and warning problem, or perhaps for the most straightforward conventional combat. It is not, however, sufficient to explain the complexity of the COIN environment. Using all available sources of information is not the same thing as viewing and analyzing complex environments holistically. In other words, an analyst might combine information from a human intelligence source, a signals intelligence source, and open-source information and meet the basic doctrinal requirements for all-source fusion, but the result still might not accurately explain or account for the interrelatedness and complexity of the environment in a way that would support effective decisionmaking.

## Systems Analysis Is Inadequate to Understand Complex Environments

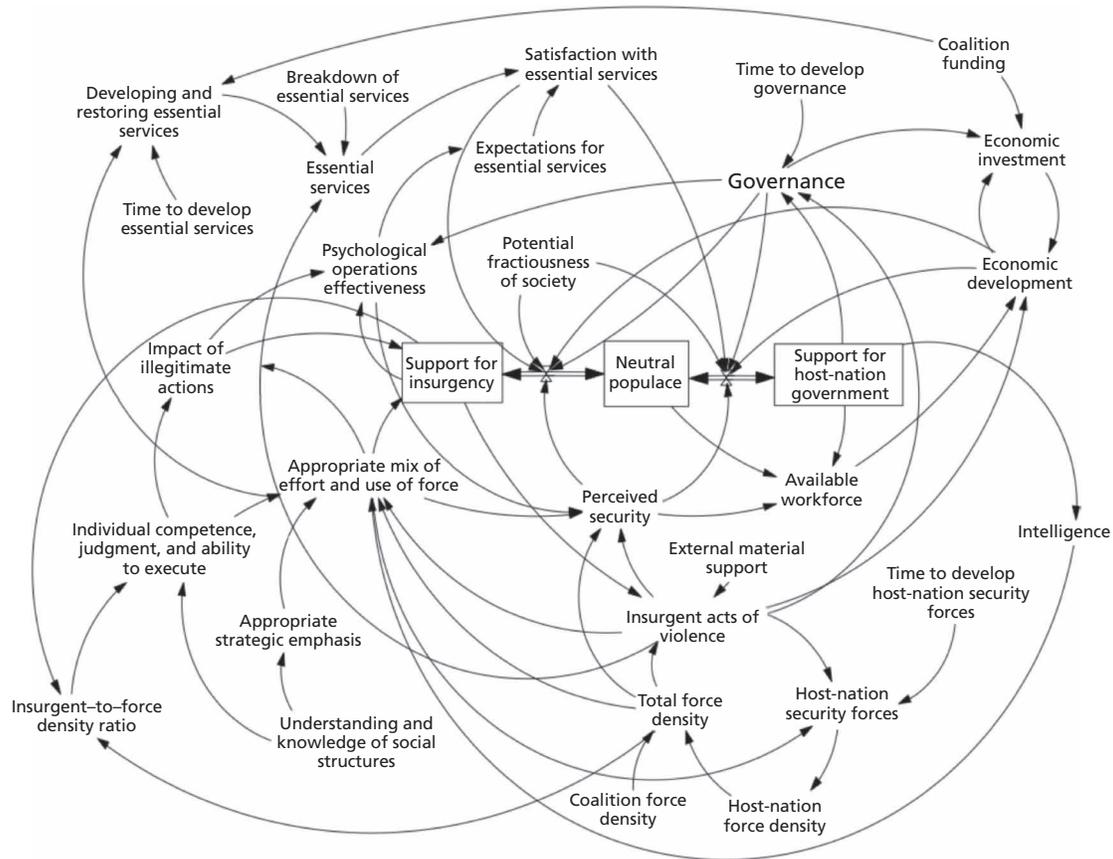
In many if not most cases, the concept of fusion has not progressed beyond the functional method due to the natural inclination within the military and DIE to attempt to reduce complex environments, people, and groups into simpler and more digestible artifacts through systems analysis. This approach avoids the daunting challenge of addressing complex environments, people, or groups holistically, and it avoids having to address analysis as a holistic process. One well-known effort to describe the complexity of both the COIN environment and COIN tactics is depicted in Figure 2.<sup>15</sup> The figure represents an attempt to visually por-

<sup>13</sup> Actual indications and warning analysis is much more complex and difficult than is implied by this simplified scenario. Real-world warning analyses incorporate hundreds or thousands of reports, many of which may be conflicting rather than corroborating. However, the typical approach to fusing these various reports is generally analogous to this example.

<sup>14</sup> See Brian Shellum, *A Chronology of Defense Intelligence in the Gulf War: A Research Aid for Analysts—July 1997*, Washington, D.C.: Defense Intelligence Agency, 1997.

<sup>15</sup> Figure 2 is based on a briefing slide that was widely circulated within the U.S. military and, specifically, among International Security Assistance Force (ISAF) personnel in Afghanistan. See Simon Rogers, "The McChrystal Afghanistan PowerPoint Slide: Can You Do Any Better?" *Guardian Data Blog*, April 29, 2010.

**Figure 2**  
**A Systems-Dynamic Interpretation of the COIN Environment and Mission**



SOURCE: Samuel Mowery, Warfighting Analysis Division, J-8, U.S. Joint Chiefs of Staff, "A System Dynamics Model of the FM 3-24 COIN Manual," briefing, 2009.

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tray the environment and the requirements for success in COIN as they are interpreted in the U.S. Army/U.S. Marine Corps counterinsurgency manual.<sup>16</sup> Even a cursory examination of this model reveals that a two-dimensional chart parceled together with broad headings and connector arrows is grossly insufficient to explain the complexity and interconnectedness of an actual environment and the requirements of the COIN mission.<sup>17</sup> Just understanding the requirements for, and potential second-, third-, and fourth-order effects of economic investment—one of more than 30 factors in the diagram, which itself is not necessarily exhaustive—has proved to be a perplexing and mostly fruitless research task.<sup>18</sup>

<sup>16</sup> Headquarters, U.S. Department of the Army, *Counterinsurgency*, Field Manual 3-24/Marine Corps Warfare Publication 3-33.5, Washington, D.C., December 2006.

<sup>17</sup> However, the authors of this model are to be commended for attempting to dissect the intricate and complex descriptions and tasks outlined in the field manual. This model probably represents the best effort to date to attempt to explain the COIN environment.

<sup>18</sup> This opinion is based on my recent participation in research of COIN investment strategies, analysis of COIN investment outcomes, and engagement with many of the researchers currently conducting analysis of these outcomes.

Despite the obvious weaknesses of this model, Figure 2 is loosely representative of the doctrinal approach to military analysis. Instead of requiring analysts to view people and groups as intrinsically interrelated, unbounded, and individually complex, capstone doctrinal publications (i.e., top-level doctrine that addresses all types of operations from conventional to irregular, such as Joint Publication 3-0, *Joint Operations*) recommend that analysts treat potentially hostile governments and militaries like a “system of systems” that can be broken into its component parts—military, civilian, political, and so on.<sup>19</sup> In system-of-systems analysis (SoSA), people and groups are simplified and categorized to ease the systems mapping process. Figure 3 depicts a SoSA map in which the complex environment is broken down into subsystems, each of which contains a distinct web of nodes (things, people, groups) and links (relationships between nodes). Some of these nodes connect across the boundaries of the subsystems, but the simplicity of this vaguely structural functionalist model prevents the depiction of simultaneous multiple identities for any one node.<sup>20</sup> In other words, this model could not show how in addition to his military identity, a military officer also has a relevant social identity and a political identity. Furthermore, while SoSA tries to explain in very basic and mechanistic terms how to reify and deconstruct a complex system, it does not explain how to reconstruct that system in a way that accurately conveys interrelated complexity.

For the purposes of color-coding, the application of SoSA reinforces the idea that once an individual or group is “coded” within a subsystem, it will act and behave in a way that is characteristic of that subsystem. In other words, military people will always act like military people, and insurgents will always act like insurgents; people in the “red” group will be “red” and act like “red.” Putting aside the fact that these subsystems are necessarily ill defined and inaccurately bounded, this is a false assumption; people and groups are not inanimate, mechanical objects. They act without external input, change their minds (often without visible reason), simultaneously possess multiple affiliations, and shift allegiances at will. Therefore, at least one of the underlying concepts of color-coded analysis in capstone doctrine is unsound.

Complex operations doctrine relies on analogous simplifications. For example, Army Field Manual 3-24/Marine Corps Warfare Publication 3-33.5, *Counterinsurgency*, recommends viewing the environment through three separate lenses: the population, the enemy, and the host nation.<sup>21</sup> Analysts are then encouraged to break these three components into bite-sized subcomponents based on a checklist-style taxonomy to create a system-of-systems map of the society, culture, and enemy.<sup>22</sup> Rather than envisioning a holistic, fused approach to

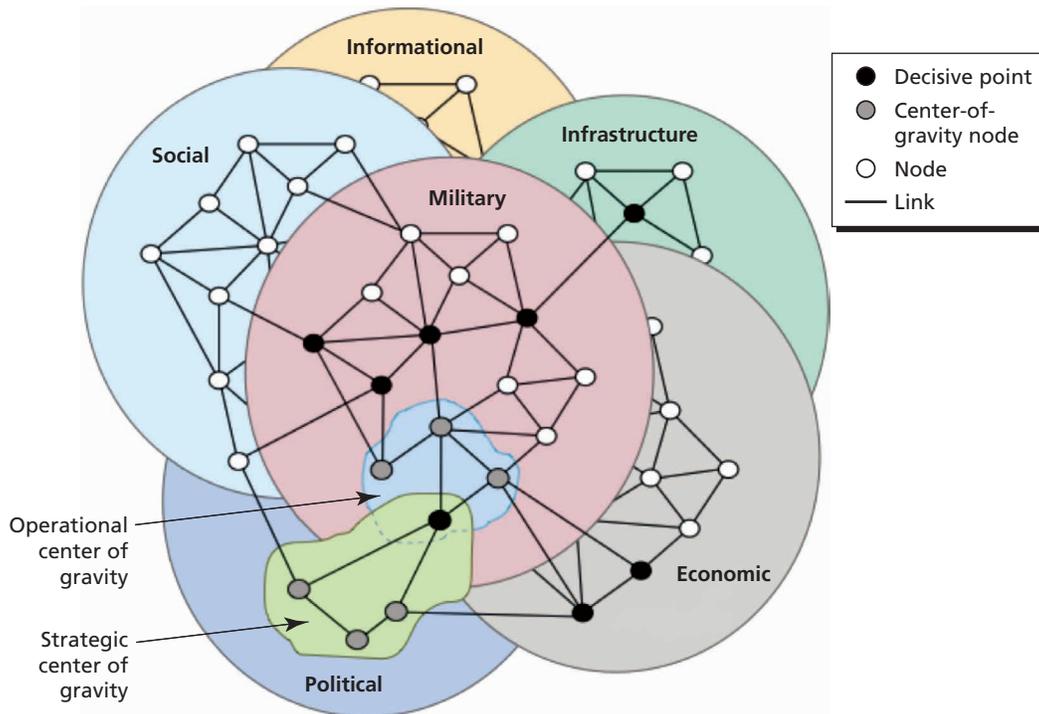
<sup>19</sup> This should not be confused with the systems analysis model of intelligence analysis presented by Rob Johnston in *Analytic Culture in the U.S. Intelligence Community: An Ethnographic Study*, Washington, D.C.: Center for the Study of Intelligence, Central Intelligence Agency, 2005, Chapter Four. For a depiction of the SoSA model, see U.S. Joint Chiefs of Staff, *Joint Operations*, Joint Publication 3-0, Washington, D.C., August 11, 2011a, p. IV-5, Figure IV-2.

<sup>20</sup> Structural functionalism is a school of thought that envisions societies as systems that can be broken down into component parts. In many ways, it closely mirrors general systems theory (see Ludwig von Bertalanffy, *General System Theory: Foundations, Development, Applications*, rev. ed., New York: George Braziller, 1974), which itself is the basis for the loosely defined process of systems analysis. SoSA is not necessarily a strict interpretation of structural functionalism, but it appears to be founded on the same general considerations. Many contemporary scholars reject structural functionalism as an inadequate means of describing human identity and interaction.

<sup>21</sup> Headquarters, U.S. Department of the Army, 2006, p. 3-1. For another example of the recommended analytic focus in complex environments, see U.S. Joint Chiefs of Staff, *Stability Operations*, Joint Publication 3-07, Washington, D.C., September 29, 2011b, p. II-27.

<sup>22</sup> Headquarters, U.S. Department of the Army, 2006, pp. 3-3–3-24.

**Figure 3**  
**A System-of-Systems Analytic Map**



SOURCE: U.S. Joint Chiefs of Staff, 2011a, p. IV-5, Figure IV-2.

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analysis, Field Manual 3-24 instead encourages analysts to balkanize the COIN environment in ways that are counterproductive to mission success—without providing an adequate theoretical basis or means for merging these discrete elements once they have been fragmented.<sup>23</sup> In the case of intelligence analysis, this balkanization leads to color-coding. In general, Field Manual 3-24, Joint Publication 2-0, and other doctrinal publications establish fusion as a lofty but narrowly and (I argue) insufficiently defined objective.

The struggle to define a holistic fusion process for COIN in current doctrine and practice reflects the pre-2001 fixation on conventional warfighting, friendly capabilities, and enemy capabilities and intentions.<sup>24</sup> With few exceptions, military intelligence had little interest in nonhostile groups and individuals prior to Operations Enduring Freedom and Iraqi Freedom. Doctrine, training, and intelligence education primarily and almost exclusively focused on methods intended to help understand enemy forces. This focus was derived from and, in turn, supported the same kind of enemy-centric focus in the operational community. Understanding

<sup>23</sup> The use of taxonomies in the COIN field manual and other doctrine represents a first step toward incorporating cultural considerations into COIN operations. The adoption of taxonomies by the military was a “better-than-nothing” approach to understanding COIN. It has proved useful in helping neophytes recognize the importance of taxonomic elements, such as “tribe” or “clan.” However, this is a relatively unsophisticated approach to understanding complex environments and, arguably, it can be counterproductive.

<sup>24</sup> For example, see U.S. Joint Chiefs of Staff, *Joint Vision 2020*, Washington, D.C.: U.S. Government Printing Office, June 2000. One could argue that there are other reasons for the creation of these artificial fragmentations, but examining those reasons is beyond the scope of this paper.

enemy capabilities and intentions is a tremendous challenge that requires the focused attention of an intelligence staff. However, this red-centric focus meant that the ability to address intelligence analysis in complex operations was inadequate when the United States entered two highly complex COIN campaigns in 2001 and 2003. It also meant that the defense analytic community did not—and arguably does not—have comprehensive hiring, training, education, or advancement policies in place to support anything but enemy-centric intelligence analysis and “red analysts.” Even if more broadly inclusive policies were in place, they might be insufficient to address the issue of channelized analysis.

## Analyses in Afghanistan and Iraq Have Been Channelized

To varying degrees, military intelligence analyses in support of Operations Enduring Freedom and Iraqi Freedom have been channelized. Enemy (or insurgent) forces, key government leaders, key civic leaders, tribes, ethnic groups, and host-nation military leaders are usually identified and analyzed as distinct individuals and groups in accordance with the doctrinal approach to analysis. A typical intelligence summary at an Army or Marine Corps division-level command has for years consisted of a section on significant activities, a section on the insurgency, a section on targeting, a section on weather, and *sometimes* a section on host-nation forces, economic issues, and key civic, tribal, and ethnic leaders.<sup>25</sup> At higher levels of analysis in theater (typically at the division level or above), a fusion officer might add in a holistic assessment that attempts to wrap up all of the subordinate elements of analysis, but these fusion sections often focus on red forces.

This enemy-centric focus dominated both collection and analysis from 2003 through at least 2006 in Iraq, and from 2001 through at least 2010 in Afghanistan. Along the way, small advances toward building a non-enemy-centric analysis capability were being made in fits and starts in various commands and agencies, but nothing was systematized at the service or enterprise level during these periods. In the past several years, the military’s approach to analysis has gradually evolved. Today, while red still dominates analysis, it would be inconceivable for an intelligence unit or fusion center not to focus a portion of analytic assets on what are now termed white and (sometimes) green individuals and groups. This shift occurred for a number of reasons; in Iraq, it happened by necessity as the kinetic fight wound down and intelligence professionals looked to new collection and analysis targets. Analysis in Iraq also evolved as the force seasoned: Over time, many experienced commanders and intelligence professionals became more comfortable with the concept of COIN.

In Afghanistan, evolution occurred as a result of both similar bottom-up revelations and top-down direction from the ISAF Deputy Chiefs of Staff for Intelligence, including then-MG Michael T. Flynn (2009–2011) and BG Stephen G. Fogarty (2011–2012). In January 2010, Flynn and his staff observed what they perceived to be a near complete failure of U.S.

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<sup>25</sup> This is a broad generalization based on reading samples of intelligence summaries from Afghanistan and Iraq for ten and eight years, respectively, and writing intelligence summaries in Iraq between 2004 and 2006. Not every command writes intelligence summaries according to even this broadly generalized framework. A review of intelligence summaries in early 2012 revealed that some do not address the population at all.

intelligence to provide analysis of the population—the focus of the COIN fight according to Field Manual 3-24—to military and civilian leaders.<sup>26</sup> In their January 2010 paper, they stated,

Having focused the overwhelming majority of its collection efforts and analytical brain-power on insurgent groups, the vast intelligence apparatus is unable to answer fundamental questions about the environment in which U.S. and allied forces operate and the people they seek to persuade [reside]. Ignorant of local economics and landowners, hazy about who the powerbrokers are and how they might be influenced, incurious about the correlations between various development projects and the levels of cooperation among villagers, and disengaged from people in the best position to find answers—whether aid workers or Afghan soldiers—U.S. intelligence officers and analysts can do little but shrug in response to high level decision-makers seeking the knowledge, analysis, and information they need to wage a successful counterinsurgency.<sup>27</sup>

Some intelligence analysts thought that the article overstated the failures of military intelligence in Afghanistan.<sup>28</sup> These analysts also believed it may not have sufficiently reflected the degree to which commanders and operations staffs shape intelligence collection and analysis.<sup>29</sup> But while one could cite a number of exceptions to the article's main contention, most contemporaneous regional-level intelligence summaries gave, at best, a brief nod to the population and the host nation.<sup>30</sup> It was clear that what passed for all-source fusion analysis in Afghanistan tended to reflect what Field Manual 3-24 refers to as “comprehensive insurgency analysis” and not comprehensive fusion analysis.<sup>31</sup>

## Military Intelligence Created a “White” Intelligence Capability

In response to these perceived shortcomings, Flynn directed the creation of stability operations information centers, or SOICs. The centers were modeled on a concept developed in Regional Command East in Afghanistan and were intended to build white and green intelligence capa-

<sup>26</sup> Similar bottom-up and top-down efforts to build a white/green analytic capability were under way at U.S. Central Command (USCENTCOM) and service intelligence agencies and activities. For example, USCENTCOM created the Human Terrain Analysis Team (later a branch), U.S. Special Operations Command built several small analytic cells, and the Defense Intelligence Agency experimented with various incarnations of human factors analysis.

<sup>27</sup> Michael T. Flynn, Matt Pottinger, and Paul Batchelor, *Fixing Intel: A Blueprint for Making Intelligence Relevant in Afghanistan*, Washington, D.C.: Center for a New American Security, January 2010, p. 7.

<sup>28</sup> This observation is based on a range of personal conversations with intelligence analysts at various agencies and military commands during this period.

<sup>29</sup> In other words, intelligence staffs are not fully in control of the direction of their collection activities or analyses. This observation is not intended to point a finger at commanders and operations staffs. Instead, it highlights the need for a comprehensive, all-hands approach to holistic intelligence analysis. It is also worth noting that the training and education commands across the services also failed to keep up with events.

<sup>30</sup> These anecdotal observations do not reflect an empirical analysis of all intelligence summaries during this period, but they do reflect a survey of more than 100 summaries from various regions in Afghanistan, as well as analytic exchanges with intelligence officers in at least two regional commands and two community-level agencies and activities. One summary contained 89 mentions of the enemy and only two references to the population or host nation. Reasons of classification preclude a more thorough examination of early-2010 intelligence analyses.

<sup>31</sup> Comprehensive insurgency analysis focuses on the insurgency and is not a holistic analysis of all actors and groups in the environment. See Headquarters, U.S. Department of the Army, 2006, pp. 3-31–3-32.

bility and analyses.<sup>32</sup> At each SOIC, analysis focused on the local population, economic issues, development issues, and, to a lesser extent, the host-nation government. Each regional command staff was given leeway to implement the SOIC concept in a way that made sense for their command. In some cases, the SOIC was established as a distinct entity, often physically separated from the intelligence analysis fusion center.

Segregation of white and green analyses from core staff processes occurred for a variety of reasons.<sup>33</sup> In some cases, a segregated cell or office was created to allow the inclusion of analysts who did not possess top-secret clearances. Efforts to include groups of population-centric collectors and analysts, such as human terrain teams, atmospheric teams, and some local nationals, might preclude situating the cell within the intelligence fusion center.<sup>34</sup> In other cases, the simple lack of physical space in the fusion center might have led to segregation; the centers were not originally designed to host SOICs. Possibly, some staffs were simply more comfortable keeping this nontraditional, nondoctrinal effort sidelined from core staff processes.

More recent efforts by ISAF have combined all the white research and analytic capabilities at the theater level under the Civil Military Integration Program. This construct may ensure greater cohesion of population-centric analytic efforts, and it may help reduce the duplication of resources or create healthy deliberation. However, the successful fusion of white analysis is only one step toward holistic intelligence fusion.

## There Is a Natural Inclination to Channelize and Focus on the Enemy

The inclination to physically separate white analysis from what is commonly termed the *fusion center* is reflective of a similar inclination to color-code complex environments as a conceptual basis for operations. Segregation of analysis by color is, arguably, a comfortable practice for some combat officers and intelligence analysts. Color-coding, and also the tendency to “see red,” might be considered either a mindset or a mental model for many commanders, staff officers, and analysts. Richards J. Heuer, Jr., the author of *Psychology of Intelligence Analysis*, describes mindsets and mental models as “a distillation of all that we think we know about a subject.”<sup>35</sup> Mindsets and mental models constrain analytic thought. For example, military training and education both instill (and, over time, reinforce) the idea that complex problems can be dissected into simplified, discrete elements and that the ultimate purpose of military operations is to defeat the enemy’s forces.<sup>36</sup> Observation and discussions with military officers

<sup>32</sup> For a full explanation of the SOIC concept, albeit somewhat idealized, see Regional Command West Stability Operations Information Center, *The Stability Operations Information Center (SOIC): Comprehensive Understanding for Comprehensive Operations*, Herat, Afghanistan, International Security Assistance Force, undated.

<sup>33</sup> Often, intelligence fusion centers would engage in a dedicated effort to understand “green” officials and forces. It was not always the case that green analysis was physically removed from the fusion center and placed within the SOIC.

<sup>34</sup> Sometimes, the intelligence fusion center at the regional level and above is considered a sensitive compartmented information facility, in which information that is classified above the secret level can be openly stored.

<sup>35</sup> Heuer, 1999, p. 5. He states further that “the terms mental model and mind-set are [more or less interchangeable], although a mental model is likely to be better developed and articulated than a mind-set” (p. 4). Some may dispute Heuer’s translation of various concepts and theories, but his insights are relevant to any discussion of U.S. intelligence analysis: his book is widely read and referenced by analysts and those writing about the concept and process of intelligence analysis.

<sup>36</sup> For example, until very recently, the mission of a Marine Corps regiment was to “locate, close with, and destroy the enemy by fire and maneuver, and to repel the enemy’s assault by fire and close combat.” This mission statement does not

involved in high-tempo operations (e.g., Iraq from 2004 to 2007 and Afghanistan from 2009 to early 2011) revealed that they believed it was possible to separate people and groups by color code and that white analysis was secondary to red analysis in terms of command priority and mission accomplishment.<sup>37</sup> This is not surprising considering both existing predilections and the practical realities of intelligence analysis during the “shape,” “clear,” and “hold” phases of COIN: Intelligence must help the commander identify and reduce threats, as well as protect friendly forces; this is an indisputable role for intelligence analysis in any combat operation.<sup>38</sup> This is a comfortable, practical, and—on the surface—seemingly logical way of thinking about COIN.

If color-coding and a predisposition to focus on the enemy are encapsulated in a mindset or mental model, combat feedback probably serves to harden or reinforce this model. Red-only intelligence analysis provides a concrete payoff during the shape, clear, and hold phases of a COIN operation, but also throughout the conflict. This is particularly true because these phases are theoretical constructs that do not always neatly translate to battlefield conditions. Red intelligence often leads directly to the capture or killing of enemy forces, which, in turn, can immediately reduce the threat to U.S. forces in the field. This payoff is literal in that it takes the enemy off the field and also in that it produces concrete performance metrics.<sup>39</sup> Any intelligence analyst would be proud to say that he or she contributed to the capture or killing of insurgents at the top of a joint targeting list. The military has a bias for action, and military intelligence is no exception. It would be easy to recognize and reward the analysts who tracked down Abu Musab al-Zarqawi or Osama bin Laden but less easy to formally recognize the analysts who might recommend a successful nonkinetic targeting option that led to an absence of action.

The enemy-centric focus is also in keeping with the kind of traditional intelligence training and education that senior and midcareer analysts underwent during the early parts of their careers, and it synchronizes with the kind of contemporary counterterrorism intelligence operations that consume a great deal of military analytic capacity across the DIE. Career development for analysts is, in many ways, predicated on the ability to understand and explain red capabilities and intent, and also to support targeting. White and green analyses are often viewed as kind of a fuzzy background or niche activity, particularly during shape, clear, and hold operations.<sup>40</sup> One former “white” analyst who worked on an Afghanistan portfolio stated, “I found my position extremely frustrating. No one really cared or understood why they should care [about sociocultural issues], while the Taliban analysts received all the attention, got to brief senior leaders, and largely shaped the discourse or reinforced the direction it was going

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address the nonkinetic aspects of COIN. Newer terminology currently under review accounts for the need to be prepared for complex missions.

<sup>37</sup> This assertion is based on my observations of and discussions with military officers and analysts from 2004 through 2011.

<sup>38</sup> Field Manual 3-24 and other official and unofficial literature on COIN break these operations into phases, including shape, clear, hold, build, and transition. Most of the kinetic activity of an operation tends to take place during the shape, clear, and hold phases.

<sup>39</sup> This description is not an endorsement of body counts or of kinetic targeting as a means to a strategic end.

<sup>40</sup> Niche white and analytic efforts for shape, clear, and hold operations might include finding ways to prevent noncombatant casualties, facilitating humanitarian support, or analyzing the capabilities of host-nation forces that are participating in the operation.

anyway.”<sup>41</sup> Although analysis of the population sometimes proved to be critically important, it ran in the background with limited attention from the staff, at least in the early periods of both wars.<sup>42</sup>

In some cases, this is still the norm; in others, white intelligence analyses drive COIN operations. It is not clear that there has been any concerted effort by intelligence staffs in the combat theaters to analyze green—either government security forces or civil officials.<sup>43</sup> Color-coding is an informal analytic construct, and the basics of sociocultural understanding have only recently been integrated into formal training and education, so the degree to which white analysis is integrated into operational planning often depends on the perspective of the commander and staff. Many commanders embrace population-centric intelligence, while others reject the concept or have not received sufficient COIN training or education to facilitate an appreciation for anything but enemy-centric analyses.<sup>44</sup> Because military intelligence analysis is designed to respond to commanders’ needs, encouraging commanders to prioritize population-centric analysis might bring channelized analyses into better balance. But “balancing the colors” is insufficient to address the underlying problems posed by disaggregated analysis.

## Color-Coding Is a False Paradigm That Undermines Analytic Fusion

Any separation of analyses by color—even a balanced separation—establishes a false paradigm that prevents the intelligence staff from providing a holistic and truly effective understanding of the campaign. The COIN environment is inherently confounding to analysis, and this trio of color-coded typologies separates people and groups in a way that satisfies what appears to be a nearly unquenchable need for clarity. But these reductionist efforts at color-coding also lead to a series of path-dependent assumptions regarding the intentions and behavior of the people and groups within those three categories.<sup>45</sup>

### Basic Assumptions Reinforced by Color-Coding

Table 1 lists the standard assumptions that military officers—including many analysts—tend to make about respective color-coded groups; this is a simplified depiction of a mental model or mindset. Friendly officials and security officers, both coalition and host-nation, are viewed

<sup>41</sup> Former sociocultural intelligence analyst, email exchange with author, February 16, 2012.

<sup>42</sup> In the case of Operation Moshtarak in Marjah, Afghanistan, ISAF placed considerable emphasis on population-centric intelligence and actions. See International Security Assistance Force, “Governance at Forefront of Operation Moshtarak,” press release, undated. This official report is reflective of broader evidence showing ISAF’s actual focus to be on governance and population-centric actions during Moshtarak.

<sup>43</sup> This finding is based on a non-random sample of reports, as well as discussions with intelligence analysts who have been focused on Afghanistan for the past three years. Exceptions would certainly exist within the intelligence shops at functional commands involved in training host-nation military forces. There are some legal and procedural restrictions on collection that, in some cases, might restrict analysis.

<sup>44</sup> Despite the maturation of the officer corps over the past ten years, some officers continue to reject the concept of population-centric COIN or holistic analysis. For example, I worked for two senior officers who described COIN as a “gunfight” and culture as “irrelevant,” and more recently I spoke with a senior officer en route to Afghanistan who stated that he “just wanted to know who to kill and who to talk to.”

<sup>45</sup> Path dependence is a theory that describes how decisions are limited by past actions that create a nearly predetermined path to future actions, even though these future actions might not be the most appropriate to address the problem.

**Table 1**  
**Assumptions of Friend, Neutral, and Enemy Categories, by Color**

Friend (Blue and Green)	Neutral (White)	Enemy (Red)
Trusted	Trustworthy	Not trusted
Same goals and intentions	Similar goals and intentions <sup>a</sup>	Opposite goals and intentions
Actions help the U.S. mission	Actions neither help nor hurt	Actions harm the U.S. mission

NOTE: Blue = friendly coalition (not host-nation) forces.

<sup>a</sup> This assertion is based on an analysis of U.S. COIN operations between 1945 and 2011. U.S. officials tend to portray civilians as neutrals who should believe that the United States has their best interests in mind.

as trusted, as having the same goals and intentions as the United States, and, unless proven otherwise, are assumed to be acting on behalf of U.S. policy objectives. Civilians, such as tribal elders and businessmen, or groups based on tribe, ethnicity, or location are viewed as neutral, essentially harmless, and as pawns to be won over in the battle for influence against the insurgency. The enemy is never to be trusted, is always acting against U.S. interests, and must be either killed or captured and thus removed from the environment. After ten years of ongoing conflict, it is less likely that analysts will view these distinctions as absolute or (when paired) Manichean, but in the early stages of the Iraq and Afghanistan wars, these assumptions were common.<sup>46</sup> And while commanders and analysts might not make these distinctions in clear-cut terms, color-coding encourages them to bin individuals and groups in ways that make it more difficult to attribute different motives or even observed behaviors to them. Color-coding results from and, in turn, reinforces the mental model or mindset.

Even a loose interpretation of this linear categorization reflects a warped caricature of reality. As stated earlier, people and groups in COIN environments are intrinsically linked in a way that precludes neat separation between colors, and they are often representative of more than one color at any point in time. This representation is fluid and particularly difficult to understand and explain. The literature on culture, motivation, identity, and behavior shows that identifying and understanding the conditions, schemas, and other constructs that describe the way people think and behave is challenging even to world-class experts. The one thing on which the more scholarly literature on culture seems to agree is that assigning singular, simple descriptors to people and groups (e.g., “Iraqi” or “neutral”) for the purposes of understanding or interacting with them is unwise. This literature also suggests that oversimplification is likely to mislead.<sup>47</sup> These concerns certainly apply to trifurcated color-coding.

<sup>46</sup> There is some intentional hyperbole in these descriptions. Few officers or analysts are so obtuse as to literally categorize people in mental bins. The intent of this section is to describe a mindset or mental model that *affects* the way military officers and analysts think about the environment and the people therein.

<sup>47</sup> As alluded to earlier, there is ongoing debate over the relative merits of deconstruction and labeling (and other types of descriptive approaches) in academia and in practical fields, such as organizational culture analysis. The most obvious division on this issue appears to have arisen between anthropologists and organizational cultural analysts (and perhaps some sociologists). These debates tend to focus on the ways in which single organizations or single aspects of larger entities (“a culture”) are envisioned and described. There does not appear to be any serious scholarly literature supporting the idea of placing simple labels and connector arrows between large numbers of loosely associated people and groups in a complex and *poorly observed* environment. Geertz’ commentary on thick description might be the most relevant to this debate. See Clifford J. Geertz, *The Interpretation of Cultures: Selected Essays*, New York: Basic Books, 1973; Melford E. Spiro, Benjamin Kilborne, and L. L. Langness, *Culture and Human Nature*, New Brunswick, N.J.: Transaction Publishers, 1994; Ulf Hannerz, *Flows, Boundaries, and Hybrids: Keywords in Transnational Anthropology*, working paper, Stockholm Univer-

Consider these three simple, notional examples intended to highlight the dangers of color-coding:

- A tribal leader (white) is also a member of the part-time district council (sometimes green) and a part-time insurgent financier (kind of red, sometimes).
- A district governor (green) is also a member of a tribe (white) and colludes with insurgents out of fear (kind of red, sometimes).
- An insurgent leader (red) is also a member of a tribe (white). While the insurgent leader is not a member of the government, he is in collusion with the tribal leader in the first example and routinely but quietly threatens the district governor in the second example.

It is easy to see how the complexity of this example could overwhelm not only available collection assets but also an analytic staff's ability to understand and clearly convey to others the relational and identity issues it poses. This is a particularly elusive analytic problem because these identities and relationships are not static. It would seem that isolating and killing the insurgent leader would solve the problem by ending the tribal leader's financing operation and eliminating the threats to the governor, but this kind of simplistic solution often leads to unforeseen consequences that do not further the COIN mission. For example, in this case, the death of the insurgent leader might cause the government official to seek out a more complex—and perhaps more dangerous—relationship with narcotics gangs. Nevertheless, color-coding has led to exactly these kinds of shortsighted decisions. These few notional examples do not account for host-nation military officers who collude with insurgents or provide largess from corrupt practices to their family members, coalition partners who might not fully support U.S. or coalition objectives, or other equally complex analytic challenges.

### **Color-Coding Segregates Analytic Approaches and Efforts**

Color-coding also creates fissures within analytic shops (even those shops are not physically segregated), with red analysts and white analysts perceiving the commander's requirements and the overall campaign differently. Red analysts tend to focus on building targeting packages and predicting threats, while the white analysts build personality profiles, identify social woes, and support development missions. Some red analysts come to see themselves solely as "threat analysts" and, in some cases, "man hunters"; white analysts necessarily fall into a similar type of trap on the other side of the analytic divide.<sup>48</sup> As a result, barring the analytic fusion officer and, perhaps, a few regionally focused analysts, few people in the intelligence shops are thinking about the environment or the campaign from a truly holistic perspective. One senior officer described this as a delineation between "fully vested 'meat eaters'" in the operations and intelligence fusion centers and "soft-power 'leaf eaters'" in adjunct locations, such as SOICs.<sup>49</sup>

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sity, 1987; Roy G. D'Andrade, "Schemas and Motivation," in Roy G. D'Andrade and Claudia Strauss, eds., *Human Motives and Cultural Models*, Cambridge, UK: Cambridge University Press, 1992; and Claudia Strauss, "Models and Motives," in Roy G. D'Andrade and Claudia Strauss, eds., *Human Motives and Cultural Models*, Cambridge, UK: Cambridge University Press, 1992.

<sup>48</sup> The term *man hunter* is drawn from numerous conversations with targeting analysts between 2004 and 2011. I worked with or spoke to a number of these analysts who referred to their work as "man hunting" and themselves as "man hunters."

<sup>49</sup> Regional Command West Stability Operations Information Center, undated, p. 3.

### Color-Coding Undermines Effective Targeting

This kind of channelization has its most obvious impact on targeting. It can lead analysts who are wholly or primarily focused on red to become advocates for capture/kill operations, while white-oriented analysts might become strong advocates for nonkinetic options. This is particularly true when red analytic teams are further broken down into targeting teams. Handled properly, this kind of division might help a commander think through a full range of options. Indeed, there are fairly thoughtful and iterative targeting meetings in which advocacy helps outline and justify multiple options—from killing to capturing, engaging, and indirectly influencing.<sup>50</sup> But divided advocacy is also a flawed approach to both targeting and intelligence fusion. It is personality-dependent in that a stronger advocate might shape a targeting decision based on charisma, rank, or staff position rather than on the accuracy and weight of available evidence. Further, because collection is currently driven by a need to provide more evidence of enemy activity than of other sorts (e.g., economic activity), most of the intelligence analysis focuses on those perceived to be the enemy—at least in the more kinetic phases of COIN operations. Therefore, it is likely that “red” analysts enter into these debates with more, and perhaps more convincing, evidence than “white” analysts.

Analytic arguments in targeting meetings might be nuanced and articulate, but a channelized approach reinforces the idea that people and groups in the environment are innately either good or bad, a belief that will almost certainly undermine a commander’s attempts to understand the many shades of gray in COIN and similar types of operations. Presenting channelized analysis to the few commanders who are predisposed to viewing the environment in overly simple terms will not convey a better understanding of the environment’s complexity. Segregation may also paint individuals or groups as not only bad—or, in current parlance, as “malign actors”—but also inherently irredeemable. In COIN, though, redeeming insurgent forces, and even some corrupt government officials, has often been central to eventual victory, and this concept of behavior (agnostic redemption) seems to be a necessary undergirding to the development of a successful reconciliation and reintegration program.<sup>51</sup>

Just as enemy-centric analysis may produce an unbalanced or unrealistic picture, many nonkinetic options are unrealistic when dealing with hardened insurgent leaders or suspicious tribal elders (if they are not one and the same). This is particularly true for individuals and groups who have not reached what William Zartman describes as a ripened state of exhaustion, or a naturally occurring willingness to participate in a political solution.<sup>52</sup> When two analytic groups on the staff—red and white—are not working in harmony, it is difficult for them to collude in an effort to provide a realistic, nuanced analytic picture and range of options for commanders.

<sup>50</sup> I participated in these meetings at various times from February through September 2004 and from December 2005 through July 2006 in Ramadi and Fallujah, Iraq, respectively.

<sup>51</sup> The reintegration of members of Sendero Luminoso (Shining Path) in Peru, former Sunni insurgents in Iraq, former Irish Republican Army members in Northern Ireland, former royalists in Yemen at the end of the Egyptian intervention, and former Nepalese Maoist insurgents are all good examples of reconciliation and reintegration of former combatants and political opponents. Perhaps not all behavior can be forgiven, but the United States has forgiven and consequently supported known insurgents in their political pursuits in Iraq and Afghanistan.

<sup>52</sup> I. William Zartman, “The Timing of Peace Initiatives: Hurting Stalemates and Ripe Moments,” *Global Review of Ethnopolitics*, Vol. 1, No. 1, September 2001.

### **Fusion Becomes More Difficult Once Channelization Has Occurred**

Once analysis has been segregated by typology, analytic integration (holistic fusion of the overall intelligence picture) is more difficult and represents an added burden on intelligence staffs. The absence of a holistic vision or *approach* throughout the early and middle stages of the analytic process tends to harden thinking, arguably creating another type of path dependency in which analysts are driven to offer a narrow and incompletely informed set of options to commanders. Sometimes, a fusion officer can compensate, at least to a degree, for the lack of a holistic approach across the intelligence fusion center. The job of the fusion officer is somewhat self-explanatory (to fuse analyses), but in practice, he or she often serves as the senior analyst and the arbiter of analytic debates on the intelligence floor. Because they have the last say on analytic findings before analytic reports are sent up the chain of command, talented and willful intelligence fusion officers can do much to integrate analyses before they reach the commander. But reliance on a single individual, or even a small team, to integrate what may be a widely diffused analytic picture is an uncertain and haphazard solution—and less desirable than a comprehensive solution to the problem of red, white, and green integration.

### **A Paradigm Shift in Fusion Analysis for Complex Operations Is Needed**

This section proposes a paradigm shift not only in the approach the military takes to analysis but also in the way that the military encourages commanders and staffs to view complex environments. Instead of viewing actors in neatly color-coded categories or attempting to convey the true complexity of the environment in a massive and ultimately unreadable SoSA “spaghetti chart,” commanders and analysts should treat all actors (people and groups) equally—or at least *consider* them equally before prioritizing them for influence—while also focusing on behavior.<sup>53</sup>

Creating a fused intelligence picture that better reflects ground truth requires commanders, staffs, and military intelligence teams to view the people and groups in the COIN environment as they are and not how they would like them to be. Commanders and staffs rightfully focus on various threats to overall stability and their own forces, but to be successful, they should also drive their intelligence staffs to produce a holistic understanding of the environment, both of individuals and groups and as it pertains to the “big picture.” To help commanders appreciate the complexity of the COIN context, analysts would have to account for the conflicting and conflicted nature of identity, motivation, loyalty, and behavior.

This requirement presents what appear at first to be insurmountable challenges to military intelligence:

- Military decisionmakers seek relatively clear, practical analyses of individuals, groups, and the overall COIN environment.
- The COIN environment is complex, so analysts attempt to break down identities and relationships into simplified components to provide clear, practical analyses.

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<sup>53</sup> *Spaghetti chart* is a term used to describe analytic efforts to depict complex social networks in visual display programs like PowerPoint. *Spaghetti* is a reference to the linkage lines that are used to depict relationships between nodes in system or social network analyses. See Figure 2 for an example of this type of visual aid.

- These components are notional artifacts that do not accurately reflect the reality of the environment, however, and they cannot be easily or logically reconstituted to form a holistic intelligence picture.
- Because systematizing and simplification are ineffective, analysts would be faced with attempting to portray the complex reality of COIN as it actually exists.
- There is insufficient information to build a truly accurate picture of complexity, however, because collection is necessarily limited and always inaccurate to some degree.
- Further, most intelligence analysts are not scholars of complexity or complex environments, nor do they have decades of experience attempting to understand and explain complex environments; they are poorly prepared for this task.

Assuming that these points are true, *all-source intelligence analysis cannot adequately explain the entirety of the complex COIN environment, either through systems analysis or through efforts to accurately portray holistic complexity.* Therefore, all analysis efforts in COIN will be deficient.<sup>54</sup> But returning to the first point, decisionmakers still require relatively clear, practical analysis. Military intelligence analysts do not have the luxury of detachment from practice and action. Therefore, all-source fusion must result in the most accurate, realistic, and *practical* analyses possible with the available information and analytic capability. This approach should acknowledge the limits of collection and analysis, and it should not promise to provide simplicity, clarity, and accuracy where they do not and cannot exist. The result will be imperfect and subject to a range of valid critiques; no proposed method for understanding complexity can be objectively “correct.” Holistic understanding will always be elusive, but it should remain a worthy goal, and any analytic approach should be modified to meet unique circumstances and changing conditions over time.

### **The New Paradigm: “Behavioral Intelligence Analysis”**

Analysts applying *behavioral intelligence analysis* would first eliminate the channelization of actors. “Red,” “white,” and “green” would disappear from the operational and analytic lexicon, at least for COIN analysis.<sup>55</sup> Instead of dividing analysis between “meat eaters” and “leaf eaters,” all analysts would be omnivores.<sup>56</sup> They would *approach* analysis as a true all-source fusion process throughout each phase of the intelligence cycle, working from the assumption that *all* actors *might* have the capacity to behave in a way that is more or less conducive to the U.S. military’s stated objectives in the conflict. Omnivorous analysts would not only consume information from a holistic perspective, but they would also describe the environment holisti-

<sup>54</sup> Here, it is necessary to note that no analytic effort, whether by the intelligence staff or experts in complex environments, could hope to adequately explain the COIN environment *as it actually exists* for decisionmaking. A detailed and carefully constructed ethnographic study of one small segment of a society would take years to complete and analyze, and even a study of this kind could not hope to inform all aspects of military decisionmaking. Studies of subcultures in the COIN environment that are completed in days, weeks, or even months are a poor substitute for actual research and constitute little more than a minor addition to the pool of available intelligence information. This pool of information will always be incomplete, inaccurate to varying degrees, and difficult to analyze.

<sup>55</sup> I focus on COIN here but do not rule out the possibility that the suggested paradigm could be applied more broadly to full-spectrum operations.

<sup>56</sup> I draw this language (meat eater, leaf eater, and omnivore) from Regional Command West Stability Operations Information Center, undated, p. 3.

cally.<sup>57</sup> Analytic support for commanders' decisions would focus on helping to determine why and how best to shift or maintain the behavior of key actors and groups in the environment (as determined by the staff) toward neutral or supportive positions along a spectrum.<sup>58</sup>

This behavioral spectrum is depicted in Figure 4. It shows hostile behavior on the right end of the scale. This behavior, whether kinetic or nonkinetic, *actively* undermines the U.S. military's mission. Examples of this behavior range from a physical attack on U.S. or host-nation forces to corruption by government officials and indirect support for insurgent groups by tribal leaders. Moving along the scale to the left, behavior may be less actively hostile but still *unhelpful* to the U.S. mission. For example, corrupt behavior not aimed at undermining the United States or the host nation government might still undermine stability. More positive behavior might include active participation in the electoral process, good governance by officials, above-board economic activities that support economic growth, or efforts to provide useful intelligence information to U.S., coalition, or host-nation forces. Government officials would be encouraged to act in ways that improved the legitimacy of the host-nation government. Analysts would identify both active behavior and the predilection to act for each key actor and group and then identify how that behavior could be shifted to the left or maintained on the left end of the scale. In many cases, analysts would probably recommend that no action be taken because action would be unnecessary or harmful, or the results could not be reasonably predicted.

Behavioral intelligence analysis rests on the notion that individuals and groups can simultaneously possess multiple identities (e.g., be a member of the host-nation military, a tribal member, and an insurgent sympathizer) and can act along the entire spectrum depicted in Figure 4 over the course of a single day. For example, the tribal leader described earlier might meet with U.S. forces in the morning to provide information on a criminal narcotics gang encroaching in his tribal area; in the afternoon, he might abstain from a vote in the district council on whether or not to censure U.S. forces for a civilian casualty incident; and in the evening, he might provide money to his cousin to support his anticoalition insurgent activity in a separate district. This individual does not fit neatly into a red, white, or green channel.

Ideally, the U.S. military would be able to influence all of these behaviors, encouraging the tribal leader to continue to provide useful information, to participate in governance even if

**Figure 4**  
**Spectrum of Behavior for Behavioral Intelligence Analysis**



RAND OP377-4

<sup>57</sup> The term *omnivore* describes intake and not output. Therefore, this is a useful if not necessarily precise analogy for the production of intelligence. I intend for it to describe analysts as not just omnivorous in their intake and consideration of information but also in their approach to the production of finished intelligence from an all-encompassing perspective.

<sup>58</sup> Certainly, identifying "key actors and groups" is another challenge for the staff. Because staffs have to base these determinations on the information they have rather than all relevant information that exists, selection will be skewed and probably inaccurate in many cases. However, a holistic approach to the selection process should make the process more accurate and practical for military operations.

his decisions as an official disagree with U.S. positions, and to abandon his insurgent support activities. Behavioral intelligence analysis would be designed to support these options, which might include focused engagement, detaining the individual for his insurgent support activities, or perhaps a more nuanced approach mixing various incentives and disincentives. Some individuals and even some groups will be targeted for killing because their behavior cannot be shifted to the left by other means.

In this context the term *behavioral intelligence analysis* would be the analysis of observed behavior, but it would also be the analysis of intent and perception based on intelligence information. Intent can be discerned through intelligence collection, primarily human and signals intelligence. These collection methods often reveal intent and perception.<sup>59</sup> Analysis might recommend that the commander engage with a tribal elder who has been observed supporting insurgent activity, but behavioral intelligence analysis would recommend that the commander also engage with the same tribal elder based on credible reports (e.g., intelligence information reports, key leader engagement reports) that he *intended* to support insurgent activity. Analysis would also focus on ways to help the commander influence the perception of legitimacy of the host-nation government. Many analysts already conduct these kinds of analyses, so this approach would not reflect a drastic shift in practice. Fully integrating it as a fused analytic approach within standard military intelligence analysis procedures would, however, appear to reflect new practice, at least by the standards set in doctrine and in recent conflicts.

### Shaping the Output of Behavioral Intelligence Analysis to Support Decisionmaking

There are many ways to analyze a complex environment and to depict key individuals and groups in analytic products without resorting to channelization. At least one analytic staff depicts key individuals as influencers within geospatial regions.<sup>60</sup> These individuals have more or less influence over events and the population in relation to each other. In an ideal version of this approach, analysis would depict individuals and groups in accordance with their power to influence hostile, nonhostile, or supportive behavior and also as targets for influence. In this way, a commander could determine which individuals and groups to prioritize and how best to shape their behavior. While it is not possible to predict all or even most second- or third-order effects from kinetic or nonkinetic influence operations in COIN, any graphical depiction would greatly benefit from a contextual narrative that can help flesh out the predilections and relationships of each target within the limits of collection.

What, then, does the term *holistic* mean within this new paradigm? It should be viewed through two separate but complementary lenses. At one level, *holistic analysis* simply means analysis of individuals and groups without artificial compartmentalization—the elimination of color-coding and SoSA mapping. This first step toward accurately reflecting complexity feeds the second step: a larger analytic effort to build an imperfect but practical depiction of actors and events, or the “big picture.” This overarching holistic vision—built by analysts who view fusion as an *approach* to analysis—would reflect both known information and known collection and analytic gaps. Showing gaps in the holistic description of the environment will not only support realistic decisionmaking, it will also help the commander and the intelligence staff prioritize collection requirements and analytic efforts. Because graphical depictions

<sup>59</sup> No intelligence information report is ever considered objectively “true,” so, at best, collection can only indicate and not confirm intent.

<sup>60</sup> Senior intelligence analyst, interview with author, January 23, 2012.

of complex environments tend to encourage artificial simplification, the overarching holistic analysis is best represented in narrative.

### **Implementing the New Paradigm Requires Both Change and Compromise**

Implementing a holistic, behavioral approach to analysis will be challenging on a number of fronts. While Heuer's efforts to describe mental models and mindsets for analysis do not necessarily represent a universally agreed-upon framework, they are useful when considering any proposed paradigm shift within the U.S. military. Heuer states that "mind-sets and mental models are inescapable,"<sup>61</sup> but he does believe that recognizing their existence can allow for more open and less biased analysis. While it is important for operators and analysts to recognize their own biases, it is equally important for the defense leadership to acknowledge Heuer's admonition; a new paradigm will require positive and periodic reinforcement. And while the purpose of the new paradigm is to prevent artificial reductionism during the analytic process, creating actionable analysis will require explanatory language that will, in some sense, be reductionist: Analysts will probably continue to label an insurgent leader as an insurgent leader and not as "an insurgent leader who is also a member of tribe X and ethnic group Y and is affiliated with political party Z." This practical necessity should not result in a general return to oversimplification if (1) the analysis underlying the report is color-blind and holistic and (2) the report provides a balanced understanding of the individual or group's behaviors, intentions, and (when available) motivations.

### **Adjusting Military Doctrine, Training, and Education**

If a mindset, mental model, or path dependency is imposed or encouraged by military training, education, and doctrine, then changes in these areas might facilitate a genuine change in analytic thought. Currently, most military doctrine, training, and education are presented according to a channelized and systems approach to operations and analysis. These concepts are firmly encoded in legacy military programs and documents.<sup>62</sup> Real change demands a rather significant adjustment to the way professional military education treats complex environments: It would require the elimination of the terms *enemy*, *neutral*, and *friendly*, except for actual combat training (e.g., fire support training, fire and movement training). Thus, it would set aside systems analysis as a means of understanding the COIN environment.

If this grander, whole-of-military shift in thinking is not possible, then considerable benefit could still be obtained by implementing this shift in the military intelligence community alone. Even if some commanders continue to demand information on "good guys, bad guys, and civilians" in COIN, analysts can at least present their findings in a way that provides a wider and more balanced range of options for action. Shifting to behavioral analysis will also help eliminate harmful fissures within the military intelligence community and within operational intelligence centers.

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<sup>61</sup> Heuer, 1999, p. 5.

<sup>62</sup> There may be no reason to change this approach for conventional operations, but change should be considered for COIN and other complex operations.

### **Effecting Minimally Disruptive Change Within the Fusion Center**

Creating a true fusion center staffed by omnivores does not mean abandoning some of the necessary specialized functions of intelligence: Operational tasks necessitate some degree of specialization. In many ways, it makes sense to have targeteers, regionalists, and functional experts, such as geospatial analysts, because these tasks require dedicated focus and, in some cases, specific training and skills. However, anyone contributing to analysis—for the purposes targeting, collection, or obtaining a holistic analytic picture—should be trained and educated to view people and groups as intrinsically complex, nuanced, and predominantly as “targets” for a spectrum of kinetic and nonkinetic command options.<sup>63</sup> Analysts would still use common tools, such as social network analysis and variations of more advanced human factors analysis, but targeting would become an all-analyst, all-source, fused process.

Implementing color-blind analysis will be particularly challenging for military intelligence groups attempting to understand complex environments like those in Iraq or Afghanistan. The temptation to bin people and groups according to an artificially simplistic taxonomy will persist even if the entire analytic team is taking a holistic approach. Full implementation of the new paradigm might take years, and the DIE can only achieve real change through a change in its training, education, and workforce.

### **A New Paradigm Requires a Shift in the Analytic Workforce Dynamic**

The division between meat eaters and leaf eaters within the DIE is subtle and, at least as I understand it, unofficial. There are probably not any orders or directives that would give recruiting or promotional advantage to a kinetic targeting analyst over a sociocultural analyst, all other things being equal. However, because the DIE tends to be threat-centric, there appear to be more requirements for analysts with threat-centric backgrounds and threat-centric professional proclivities.<sup>64</sup> “White” analysts might not compete effectively for these jobs, so their career prospects might be limited to the small and poorly defined field of sociocultural analysis.<sup>65</sup> If left unaddressed, this career channelization will, over time, reinforce the channelization of analysis by color and exacerbate the problems described here.

### **Considering Three Options for Implementing the New Paradigm**

While this paper addresses analysis for complex operations like COIN, any general change in the analytic workforce of the services or the civilian elements of the DIE will necessarily affect analysis of not only complex operations but also of conventional threats, terrorist threats, defense economics, and any other target of military analysis. This might or might not be desirable: A colorblind workforce might be more effective at addressing intelligence challenges for

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<sup>63</sup> For example, under the new paradigm, targeting boards would simply address all key actors and groups as targets for behavioral influence, prioritizing analysis based on relative influence or a similar resource-allocation scale. Some targeting boards already apply some variation of this approach. Therefore, this example does not reflect a dramatic leap into untested territory. Instead, it recommends building upon existing small-scale experimentation. These experiments are not well documented in the unclassified literature, but they are worthy of detailed examination.

<sup>64</sup> This observation is based on my experience within the DIE as an analyst, analyst supervisor, member of analyst hiring boards, and researcher focused on intelligence and intelligence workforce issues.

<sup>65</sup> It is possible that they have no personal incentive or desire to apply for these jobs. Workforce channelization is an issue of subtle exclusion and also self-exclusion.

conventional operations, but that is not the focus of this paper. If the DIE leadership accepts that there is a need for a colorblind approach to analysis, three personnel options present themselves:

1. *Status quo.* Continue with the current model of recruitment, training, and staffing and treat the issue of color-coding on a case-by-case basis, shaping training or staffing to address specific operations. This would cause the least disruption to the analytic community but will probably have the least effect on the problem.
2. *Specialization.* Create a specialized class of analysts who are capable of conducting colorblind, all-source analysis for complex operations. These analysts would be specially recruited and trained to approach complex operations holistically. This approach seems risky in a period of static or shrinking budgets, when specialized capabilities are sure to face scrutiny. It also reshapes rather than eliminates what appears to be an existing divide within the defense analytic community: It would build “red” analysts and omnivores instead of “red” and “white” analysts.
3. *“Gray” the force.* Retool recruiting, training, education, and staffing in a way that reduces or eliminates color-coded channelization in approach, methodology, and job description. This will necessarily affect all types of analyses, not just analysis for complex operations. It will have the greatest potential to remedy the problem of color-coding, but it will also require the greatest amount of change.

Clearly option 3, to “gray” the force, best matches the critique made in this paper. Creating omnivorous analysts within the services and the civilian analytic community will require a review of existing training, education, and promotional pipelines. Basic military specialty training in all-source analysis now tends to address enemy (red) or other (white) issues, such as economics or human terrain, so it will be necessary to find a way to reshape this training to encourage a holistic approach. This does not mean that training courses need be abandoned or curricula tossed out. Specialized training in intelligence systems, geospatial analysis techniques, and meteorology would effectively remain unchanged. Existing courses in analysis could simply be revised. These revisions might reveal opportunities to condense some training in a way that would instead free up additional time.

The third option three might be preferred, but it is also the most challenging. While DIE leadership is attempting to integrate white analytic capability to some extent, natural channelization may be leading the enterprise toward the realization of option 2. This option would recognize advances in sociocultural analysis made over the past ten years, but it would do so in a way that would not lead immediately to true fusion. This option is preferable to option 1 (status quo) because it at least represents an attempt to preserve critical sociocultural analytic skills obtained over the past ten years of complex operations. Option 1 would be the simplest and perhaps most flexible way of addressing the need for analytic fusion in COIN, and it might be preferable if the DIE collectively determined that the need for this type of fusion exists only in a subset of military intelligence analysis (e.g., COIN, irregular warfare). However, it is not clear that this approach would advance or even preserve the sociocultural analytic capabilities developed between 2001 and 2012.

Through the Defense Intelligence Socio-Cultural Capabilities Council, the Office of the Under Secretary of Defense for Intelligence is attempting to better define sociocultural and human terrain analysis, but each possible solution brings with it a host of trade-offs in terms

of workforce balance, budget, and methodology.<sup>66</sup> To many observers of the DIE, simply preserving recent advances and better defining sociocultural analysis would be major victories in the overall effort toward the creation of a holistic fusion process. However, option 3 should represent the ultimate goal for the creation of an analytic workforce capable of delivering truly fused analyses. Implementing this option will require not only buy-in from DIE leadership but also a whole-of-enterprise approach that includes a human resources plan that is carefully aligned with the new paradigm.

## Fusion for the “Post-COIN” Environment

The Obama administration’s January 2012 *Sustaining Global Leadership: Priorities for 21st Century Defense* emphasizes COIN and irregular warfare as primary warfighting functions for the U.S. military and, therefore, for the DIE.<sup>67</sup> However, this strategic document also makes it clear that the United States is unlikely to engage in the kind of “industrial-strength” COIN efforts prosecuted in Afghanistan and Iraq, at least not in the foreseeable future. Defense officials might not want to change the overall training and education of officers and enlisted personnel in a way that abandons traditional thinking, and defense intelligence officials might be reluctant to reshape the DIE’s approach to analysis or its analytic workforce to meet the requirements of a mission—even an ongoing mission—that appears to some to be almost anachronistic. The debate over whether or how to retain the operational and intelligence skills necessary to fight another COIN campaign is both reasonable and necessary in the face of new strategies and impending budget constraints. But if any of the lessons recorded during a decade of COIN involvement are to be institutionalized, now is the time to do so.

This debate should also recognize that many of the insights and skills obtained in Afghanistan and Iraq are applicable in various ways to each of the other nine core missions listed in the administration’s strategy. COIN operations are complex, but there is nothing simple about the broader field of irregular warfare—or counterterrorism, humanitarian relief, stability operations, countering weapons of mass destruction, operating in cyberspace, maintaining a nuclear deterrent, or deterring and defeating aggression. Each of these missions requires intelligence collectors and analysts to obtain and describe an imperfect vision of a dynamic and complex operational challenge. It is widely recognized in the field of national security analysis that the world has become increasingly interconnected, that traditional archetypes are crumbling as nonstate entities gain influence, and that, if there ever was an era of geostrategic, regional, or even village-level simplicity, it is now over.

To stay relevant to each of the administration’s priorities, military intelligence must be able to present complexity in a way that is effective and realistic. This does not mean reflecting information from a variety of sources through a narrowly defined approach to a complex problem, presenting analysis by INT, viewing complex societies as “systems,” or targeting people

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<sup>66</sup> These analysts inhabit a poorly defined, fuzzy, but nonetheless distinct workforce pool that is not supported by structured recruiting, training, or education across the DIE. Blame for this situation cannot necessarily be assigned to the defense intelligence leadership. Instead, the current arrangement reflects the results of what has been an ad hoc and scattershot development of nondoctrinal and nontraditional analytic capabilities.

<sup>67</sup> See U.S. Department of Defense, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*, Washington, D.C., January 2012.

and groups based on their stated affiliations; this is not true fusion. Instead, it means approaching intelligence analysis as an all-source, colorblind practice that focuses on the behavior and intentions of all actors on the basis of their relevance to the problem at hand. At the service and enterprise levels, this will require abandoning the comfortable yet dated frameworks both for analysis itself and for analytic recruitment, training, and education, as well as adopting a new paradigm for analysis.



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