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Vulnerability Assessment Software Toolkit (VAST)

Military Critiques of the Current Assessment Process for the Human Domain – An Annotated Bibliography

Judith M. Vondrzyk, Lucy A. Whalley, and George W. Calfas

December 2017

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Final report

Approved for public release; distribution is unlimited.

Prepared for Assistant Secretary of the Army for Acquisition, Logistics, and Technology
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Washington, DC 20314-1000

Under Program Element T45, Project BHCF09 (P2# 458305), “Vulnerability Assessment Software Toolkit”

Abstract

The Army increasingly recognizes the importance of the social systems in the conduct of operations abroad. However, the current standard Army frameworks and practices make no attempt to understand the social power dimensions of the human domain. This report provides an annotated bibliography of a subset of sources identified in the process of reviewing literature for the Vulnerability Assessment Software Toolkit (VAST) project. This literature review identifies articles written by current or former members of the military who constructively critiqued or otherwise offered suggestions intended to improve the Army's human domain assessment process.

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Preface

This study was conducted for the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA(ALT)) under Project BHCF09 (P2# 458305), “Vulnerability Assessment Software Toolkit.”

The work was performed by the Land and Heritage Branch (CNC) and the Environmental Processes Branch (CNE) of the Installations Division (CN), U.S. Army Engineer Research and Development Center, Construction Engineering Research Laboratory (ERDC-CERL). At the time of publication, Dr. Michael J. Hargrave was Chief, CEERD-CNC; Mr. H. Garth Anderson was Chief, CEERD-CNE; and Mr. Donald K. Hicks was Acting Chief, CEERD-CN. The Technical Director was Mr. Kurt Kinnevan for Adaptive and Resilient Installations (CEERD-CZT). The Interim Deputy Director of ERDC-CERL was Ms. Michelle J. Hanson, and the Interim Director was Dr. Kirankumar V. Topudurti.

Special thanks are due from the authors to COL Dennis J. Cahill (U.S. Army, retired), who is the Director, Civil Affairs Force Modernization (AOJK-CAF), U.S. Army John F. Kennedy Special Warfare Center and School/Special Operations Center of Excellence (USAJFKSWCS/SOCoE), Fort Bragg, NC. He either provided articles or pointed the authors in the direction of several articles contained in this annotated bibliography.

The Commander of ERDC was COL Bryan S. Green, and the Director was Dr. David Pittman.

1 Introduction

Background

The Army increasingly recognizes the importance of the social systems in the conduct of operations abroad. However, the current standard Army frameworks and practices (DIME-FIL, PMESII-PT, METT-TC, SWEAT-MSO, and ASCOPE)¹ make no attempt to understand the social power² dimensions of the human domain. The following seminal citations highlight the importance of this ill-defined research area:

Recent and ongoing conflicts reinforce the need to balance the technological focus of Army modernization with a recognition of the limits of technology and an emphasis on the human, cultural, and political continuities of armed conflict. Nations and organizations in the future will fight for the same reasons that the Greek historian Thucydides identified 2,500 years ago: fear, honor, and interest.

TRADOC Pamphlet 525-3-1, 31 October 2014, p 8-9).

[Thucydides reference taken from: “Thucydides” in The Landmark Thucydides: A Comprehensive Guide to the Peloponnesian War]

The Joint Concept for Human Aspects of Military Operations (JCHAMO) refocuses the future Joint Force on a critical and ephemeral element of warfare – understanding relevant actors’ motivations and the underpinnings of their will. By focusing on the human aspects of military

¹ Spell-outs of terms in parentheses: Diplomatic, Information, Military, Economic, Financial, Intelligence and Law Enforcement (DIMEFIL); Political, Military, Economic, Social, Infrastructure, Information, Physical Environment, and Time (PMESII-PT); Mission, Enemy, Terrain, Troops available, Time, and Civilian considerations (METT-TC); Sewage, Water, Electricity, Academics, Trash, Medical, Safety, and Other considerations (SWEAT-MSO); Area, Structures, Capabilities, Organizations, People, and Events (ASCOPE).

² We define social power here as that which is present in all social relations, in ongoing processes or interactions. It is systemic or constitutive, e.g., “systematically structuring possibilities for action, or as constituting actors and the social world in which they act.” This systemic or constitutive conception views power as “the ways in which given social systems confer differentials of dispositional power on agents, thus structuring their possibilities for action” (Mark Haugaard, “Power: A ‘Family Resemblance Concept,’” *European Journal of Cultural Studies* 13 no.4 [2010], 425); see discussion of systemic power in S. Clegg, *Frameworks of Power* (London: Sage, 1989); Amy Allen, “Feminist Perspectives on Power,” *The Stanford Encyclopedia of Philosophy* (SEP online), Edward N. Zalta, ed. (Stanford, CA: Stanford University, Fall 2016 edition), <https://plato.stanford.edu/archives/fall2016/entries/feminist-power/>.

operations, the concept recognizes that war is fundamentally and primarily a human endeavor.

GEN. JOSEPH F. DUNFORD, JR., USMC
Chairman of the Joint Chiefs of Staff
JC-HAMO, 25 January 2016

Additionally, as MAJ GEN Robert B. Brown and MAJ Ronald W. Spring note, “The Human Domain cannot be controlled or managed by technical means or capabilities; it requires human contact – person to person interaction – with duration and persistence over time.”³

Despite past efforts, the Army remains unable to adequately define and understand social systems. Although the Army has more than 15 years of lessons learned from combat operations in Iraq and Afghanistan, writers of its doctrine still struggle with how best to address problems related to social systems. The Army’s previous efforts have been constrained by its long tradition of developing inventory-based tools, an approach that does little more than list concerns. This traditional approach, however, does not help soldiers make sense of the information they have so carefully compiled.

Further complicating the Army’s understanding of social systems is its historical predilection for relying primarily on western-oriented, First World cognitive psychologists, political scientists, and economists to explain complex sociocultural dynamics within the Third World. In their attempts to understand social systems and convey that understanding convincingly to the Army, scholars in these fields have often relied upon measures that can be quantified and ingested into computational models. Unfortunately, these models fall short of being able to characterize the underpinnings of human behavior in a global context. Social scientists from other humanities disciplines, employing qualitative methods and theoretical paradigms associated with their particular field of inquiry, are what the Army needs to better explain social systems.

³ Steven Metz, *Strategic Landpower Task Force Research Report* (U.S. Army War College, 3 Oct 2013).

Moreover, political-military intelligence analysis focuses on relations between nation-states and the functioning of their institutions and key leaders in their political systems. Military interventions have repercussions in the international political arena. However, military operations occur at the local level and have impacts on local politics. Currently, the Army lacks the methods and tools to understand local politics, which take into account the nature of the relationship between government and the governed as well as the structural foundations for the differential exercise of social power.

Objective

This annotated bibliography was prepared in support of the Vulnerability Assessment Software Toolkit (VAST) research effort. As social scientists who have not served within the intelligence or civil affairs career fields, the VAST team nonetheless could look at the Army's doctrine and methods for assessing the human domain and perceive it was insufficient to the task.

Scope

To validate its initial impressions, the research team collected critiques of existing doctrine and methods made by members of the military with experience in applying the doctrine and methods. This annotated bibliography contains some of the most recent, relevant, and direct critiques the team found. It is not nor was it intended to be exhaustive.

While this review primarily concentrates on Civil Affairs (CA), the sources reviewed in Chapter 2 are rarely focused solely on CA. Many of these articles are focused on the ways in which knowledge of local culture can aid an understanding of the operational environment. Focusing on "culture" and "human terrain" was supposed to help the U.S. find its way through the morass of Iraq and Afghanistan. Many of these articles were written as the result of frustrating engagements in those two countries and within the counterinsurgency (COIN) paradigm that was prevalent at the time.

The observations and insights of the articles that follow, despite their origins in the particular problems of Iraq or Afghanistan or within the struggle to execute a successful COIN campaign, nonetheless help map the places where the U.S. military either fell short, and/or continues to fall

short in the ways and methods used to understand the operational environment of foreign cultures. There has been increasing recognition that the military must arrive at a holistic understanding of the problem, and that the present PMESII-PT x ASCOPE construct is insufficient to the task.

The struggles by members of the military to understand what has not worked and to make recommendations for improvement determine where the gaps are and how social science might reduce these gaps while simultaneously improving the Army's holistic understanding of the operational environment. The articles in this annotated bibliography may appear to veer wildly off topic; however, they are all some way relevant to the task of mapping how past attempts to understand foreign contexts have evolved. The problem is not yet solved. The solution to the problem has been the "work in progress" reflected in the articles identified and discussed herein. There remains ongoing tension between CA and intelligence data collections and analyses, and the question of how to successfully integrate those two distinct data streams and analysis efforts.

2 Reviewed Literature

Source: George Franz, David Pendall, and Jeffrey Steffan, “Host Nation Information Requirements – Achieving Unity of Understanding in Counterinsurgency,” *Small Wars Journal*, 2009⁴

This article introduces the need for Host Nation Information Requirements (HNIR) within the context of COIN in Afghanistan. In the following excerpt, the authors define and discuss the HNIR concept (p 3–4).

What are HNIRs?

What are they? HNIR represent a commander driven cultural change within the ISAF Joint Command. They are more than just questions—they are tailored and the “right questions” to drive effective population based COIN. HNIR enable the commander to make informed decisions – allow him to more effectively conduct the full spectrum of military and civilian activities that will achieve popular support for government. Information at local levels is systematically collected by organizations across the command, fused, and analyzed to produce knowledge and understanding.

Host Nation Information Requirements is information the commander needs about friendly nation institutions or organizations in order to partner effectively, develop plans, make decisions, and to integrate with civilian activities. Depending on the circumstances, information may include the status of provincial, district or local governance, economic development, infrastructure, or security forces. Other examples include:

- Popular Support – Sympathizers and Active Supporters
- Population Conditions, Beliefs & Structures
- Infrastructure, Services & Economy
- Governance Development, Capacity & Tactics – Central Government, Engagement /
- Empowerment of Traditional Governmental Structures, Overall Governance, Power Brokers

⁴ Source provided by COL Dennis Cahill. Published online: <http://smallwarsjournal.com/jrnl/art/host-nation-information-requirements>.

- Host Nation Security Force Development, Capacity & Impacts – Tactical and Institutional

The scope of HNIR is designed to be comprehensive. These information requirements are far broader than “intelligence”, rely on functional experts and integrated processing, and every organization is a potential contributor and “sensor” in the field. The challenge is to harness the staff expertise and information flow to inform the commander and staff so that the context, subtleties and biases inherently important in a counter-insurgency are surfaced and understood.

The intelligence function is an important component in answering the HNIR but the preponderance of information will come from unclassified contributors. The information is available in a variety of reporting processes or can be readily obtained by overt means, and often from non-military sources. Whereas intelligence is usually related to data and specific information an enemy is deliberately trying to conceal or keep secret, the information on the friendly nation characteristics and local circumstances are visible and collectable in the normal course of operations and trust based interaction among partners in a COIN environment. Certainly, there is a place for intelligence collection to provide certain details and discern the existence of deception or bias within the HNIR, but the vast majority of the information is openly exchanged.

Specific examples of HNIR may include:

- What influences are inhibiting the extension of governance in district X? (Governance)
- Who are the key influencers and community leaders that will determine the right projects for economic development? (Development)
- What partnership activities should we take to ensure sustainable freedom of movement for the population? (Security)
- What resources are required to facilitate the access to justice for the district Y? (Justice)
- What grievances are present and are inhibiting trust between the local tribal elders and the district administrators? (Governance)
- Where and when can we enhance the growth of government capacity to serve the population? (Governance)

The authors' argument across the entirety of this article seems a bit muddled. For example, they argue that information on the host nation is readily available (unclassified and needs only to be observed, collected, reported, synthesized, and shared); however, they then move on to argue that this information must be better shared across various echelons and domains, rather than stove-piped. Thus, there are two components identified in the paper:

1. Identifying a type of information that had not been given attention to or leveraged.
2. Identifying issues related to the sharing of information (of any kind) across domains.

Problems with the term HNIR

Nowhere do the article's authors address how one makes sense of the information, nor do they seem to break free from the types of information they currently collect; they've just added another "sector" across which to collect it or pay attention to it from a different angle.

There is no theoretical underpinning to determine what HNIR might be, what questions to ask, or what frameworks might guide determination of what is important/most important. The questions they provide in illustration are very specifically task-oriented rather than helping to holistically map various ways and means through which different forms of power flow so that the military could understand the elements in play at both micro (local) and macro (province/region) levels.

An attempt was made to find out what had become of the concept of HNIR since this 2009 article. The term does seem to have found some wobbly legs. An internet search turned up an article by the same three authors (all active duty [ACDU] Army officers) in the April 2010 issue of *SIGNAL*. The concept of HNIR was also referenced in a 2013 Intelligence Operations Best Practices Focus Paper, published by the Deployable Training Division (DTD) of the Joint Staff (J7). These two documents are reviewed below.

Source: George Franz, David Pendall, and Jeffrey Steffan, “Command's Information Dominance Center Fuels Comprehensive Operations,” *SIGNAL*, April 2010.⁵

This paper (published a year later by the same group of authors as the preceding source) mentions use of Combined Information Data Network Exchange (CIDNE), but it does not go into any real detail about what data is collected or how the collected data is analyzed. Rather, the authors focus on CIDNE as being a means for all the various partners to share and access the same data, regardless of access to the Secret Internet Protocol Router Network (SIPR) or Nonclassified Internet Protocol Router (NIPR) networks maintained by the United States. The authors suggest that CIDNE was developed more as the All Partners Access Network (APAN) of Afghanistan Ops. The authors' focus here with CIDNE seems to be on data dissemination.

Source: Joint Chiefs, Directorate J7 for Deployable Training Division, “Insights and Best Practices Focus Paper – Intelligence Operations,” 2013⁶

The general impression is that this paper presents a very vague identification and articulation of a gap, but it proposes a solution that is pretty feeble and random because it is completely dependent upon the education (e.g., social science, political science, anthropology, economics) of the person(s) who happens to be formulating the questions that need answering within the civil society realm. It's a stab at articulating the gap, but not a particularly good one.

Of note is the paper's mention of how military staffs have worked to see the operational environment in a more holistic way, rather than focusing exclusively on the PMESII(-PT) construct. Aside from expanding who on the staffs might be engaged in this analysis (based upon their unique educational background or real-world experience), this paper does not provide a detailed description of how to arrive at this more holistic understanding.

⁵ Source found by searching the internet for HNIR to see how widely this term/concept was used by the U.S. Army. This article was posted at Armed Forces Communications & Electronics Association (AFCEA) website: <https://www.afcea.org/content/commands-information-dominance-center-fuels-comprehensive-operations>. AFCEA was formed in 1946, and it may be of some interest to the VAST team with regard to consumption of big data.

⁶ Source found by searching the internet for HNIR to see how widely this term/concept was used by the U.S. Army.

In the graphic from an outtake of the article (Figure 1), one can see that the authors describe the process as “layered.” However, it is not clear how and to what extent this “new” way of analyzing the operational environment is different from and better than the old way.

Figure 1. Excerpt from document that focuses on layering (Joint Chiefs 2013).

2.0 UNDERSTANDING TODAY'S COMPLEX ENVIRONMENT. Operational headquarters have had to expand their analysis beyond a military-centric view to gain a greater holistic understanding of the Operational Environment (OE). We have seen staffs use a more holistic but structured analysis to better discover (and uncover) relationships, patterns, behaviors, and activities in the operational environment.

The entire staff is involved in this broader analysis to leverage their different expertise. However, we find that the J2 is still best suited to orchestrate this broader analysis and share this understanding with the commander, across the staff, and with higher, lower, and adjacent stakeholders.

The Joint Intelligence Preparation of the Operational Environment (JIPOE) process incorporates the interrelated aspects characterized by the PMESII-like construct to develop a multidimensional assessment of the environment. Commands that can successfully exercise JIPOE across the PMESII spectrum have proven capable of developing a greater situational understanding of the environment and the adversary, and consequently better support the commander's decision making.

The operational forces have evolved how they analyze and visualize the operational environment using this “PMESII” construct. Due to the complexity of the task, many of the HQ initially analyzed each of the PMESII aspects separately. They then presented their analysis in what could be viewed as stove-piped PMESII element briefs due to the complexity and scope of the material, trusting that the resultant dialogue would enable the commander to discern the linkages and relationships between these elements. This earlier construct has evolved toward more holistic visualizations that bring out more of the potential linkages within the overall “system.”

Today we find an even more structured analytical process that layers different elements and incorporates them into relational geo-based databases. This further brings out relationships, patterns, behaviors, and activities in the operational environment. An example is the “7 Layers” process used by one organization. Each of the layers has designated “contributors,” located both within the staff and with stakeholders whose input helps provide the necessary fidelity and understanding.

Analysis is important to understanding the OE. Operational HQs continue to emphasize the need for unbiased analysis coupled with the need for proactive best judgment from the analysts. Bias is nearly impossible to completely remove; thus we see a continuing need for a focus on assessing and accounting for bias (see figure from a current J2). A Red Team supporting design and planning also assists in reducing bias (further discussed in the *Design and Planning* focus paper).¹

Analytical Caution

>When looking for patterns , you will find them, but they may be in your mind rather than in reality

- > Can you test the pattern?
- > What bias & assumptions underlie your analysis? Are they valid?
- > If the assumption was untrue , then what happens to your analysis?

Judgments are not fact, nor are they necessarily true, but we need your best judgment.

This 2013 paper did provide links up front to military repositories that may be of further interest, and their contents of potential value to the VAST project. These links are listed here:⁷

- Joint Lessons Learned Information System (JLLIS) (*CAC enabled and registration required*): <https://www.jllis.mil/JSCC/apps/index.cfm>
- Joint Doctrine, Education, and Training Electronic Information System (JDEIS) (*CAC enabled*): <https://jdeis.js.mil/jdeis/index.jsp?pinde=0>
- APAN (*registration required*): <https://community.apan.org/default.aspx>
- Joint Electronic Library (*public website*): <http://www.dtic.mil/doctrine/index.html>
- Joint Staff J7 Joint Training Intelink (*CAC-enabled*): <https://intelshare.intelink.gov/sites/jcw/jt/default.aspx>

Source: U.S. Army, “Background,” paragraph 1.2 in *The United States Army Military Support to Governance White Paper, Oct 2015*.⁸

The following text represents an excerpt from paragraph 1.2:

(4) The requirement to “(e)stablish and conduct military government until civilian authority or government can be restored” has long been a responsibility that has been avoided by the military starting with Civil War reconstruction. This avoidance became apparent at the end of WWI as the Army of Occupation in Europe proved woefully lacking in its ability to assert military authority and establish military government. As a result, of that experience, the War Department established civil affairs and military government units to enable military governors to establish authority in occupied friendly and enemy territory respectively during WWII. Residing in the U.S. Army Reserve since the end of World War II and represented in the Pentagon by variations of the Office of the Chief of Civil Affairs and Military Government from 1943 to 1962, this capability began to atrophy during the war in Vietnam due to limited use and competing Cold War priorities. With the end of the Cold War, the requirement to support the establishment of military government was officially assigned to the U.S. Army's CA force in 1994 by DoDD 2000.13, Civil Affairs, and recently restated in the 2014 reissuance. However, over time, concepts, doctrine, and tactics, techniques, and procedures for the planning and execution of military government had become virtually non-existent and

⁷ Accessibility: DTD papers are available in PDF format.

⁸ Source provided by COL (ret) Dennis Cahill.

a lack of clear guidance from the CA branch proponent regarding the qualification and certification requirements of military government civil sector expert positions resulted in CA units no longer recruiting or assigning the right individuals to the positions at the right time. While each of these positions has a Skill Identifier for a civil sector functional specialty, the Army has been unable to recruit them in sufficient quantities. Consequently, the Army was unprepared to anticipate, plan for, and execute this requirement on the scale required by major combat operations and their transitions to stability operations in Afghanistan and Iraq following the events of September 11, 2001 (9/11).

The paragraphs quoted above from the October 2015 white paper clearly state that Army skill identifiers exist for required civil sector functional specialties. In the past, the Army would recruit civilians who had the requisite skills and experience in these functional specialties to serve in Reserve CA units. The Army has been unsuccessful in recruiting enough civilians who have the desired knowledge, skills, and experience to meet CA needs.

The VAST team will want to discover which skills the Army has identified as needed to fill out the CA reserve ranks when recruiting among civilians.

Source: Adam Scher (Major U.S. Army), “The Need for a Brigade Politics-and-Policy Staff Officer,” *Military Review* (Jan-Feb 2017): 34–41⁹

This article, written by an assistant professor of American politics, policy, and strategy at the U.S. Military Academy (USMA), argues that the Army needs to start formally educating and fielding Politics-and-Policy staff officers for each deploying basic combat team (BCT). The politics-and-policy staff officer, unlike the tactical S2 staff whose focus is by needs on the enemy, would focus on matters pertaining to host-nation governance and security forces.

⁹ Source provided by COL (ret) Dennis Cahill.

According to Scher (p. 37), the politics-and-policy officer would be an additional skill qualifier for the officer's current functional area:

The politics-and-policy officer need not be its own functional area that forces an officer out of the operations track and command pipeline like the strategist, acquisition, or foreign-area officer specialties. Rather, it could be an additional skill identifier consisting of formal schooling and a utilization tour. Selection must be competitive and nominative, and schooling should consist of formal master's degree programs in international relations, foreign policy, public administration, finance and business, or regional studies, with coursework in economics and public policy. Officers who acquire this additional skill identifier should be managed similarly to those who complete the School of Advanced Military Studies.

Of special note here is both the argument that skills presently lacking within the BCT are needed, and the idea for how to meet that need with as little effort and as little disruption to existing officer career paths as possible. It is not clear to the authors of this paper how CA personnel are distributed, especially to BCTs. (Do BCTs routinely have a CA soldier or officer on staff? Could this approach work for social science-related CA concerns?) The solution proposed by Scher (p 37) relies only upon officers, and a limited number at that (i.e., maximum allocation of 90 officers):

With a planned reduction to thirty BCTs by fiscal year 2017, the Army would only need to allocate a minimum of sixty officers to a maximum of ninety officers per year to this program. One politics-and-policy officer per BCT would require thirty officers, with an additional thirty in a one-year graduate school program ready to replace the existing politics-and-policy officers after a twelve-month utilization tour. If the Army wanted to send each politics-and-policy officer to a two-year graduate program, an additional thirty officers would be required. The question of how to incorporate these officers back into the appropriate key development and command pipelines remains.

Note that the VAST team will likely recommend an *interdisciplinary* course of instruction in the social sciences as the best training for the needed skill set, so the idea of sending anyone off to an existing civilian graduate school program wouldn't work.

The most powerful part of this article is that Scher identifies a particular knowledge gap that is not entirely dissimilar in its essential nature to what the VAST team members believe exists in CA with respect to social science knowledge.

Source: CAPT Matt Pottinger (USMC), MGEN Michael T. Flynn (U.S. Army), and Paul Batchelor (Defense Intelligence Agency [DIA]), “Fixing Intel: A Blueprint for Making Intelligence Relevant in Afghanistan,” (Washington, DC: Center for a New American Security, 2010)¹⁰

Despite MGEN Flynn’s diminished reputation, this paper made a lot of sense when it was first published and read by this paper’s authors. Obviously, COL Cahill also thinks there’s some validity to the arguments contained in it, because he provided it for the VAST team’s consideration and review. After reviewing a PowerPoint briefing that COL Cahill provided, which laid out how a Stability Operations Information Cell (SOIC) was assembled and designed to function, it’s pretty clear that the Army was tasked with figuring out how to operationalize MGEN Flynn’s ideas for Afghanistan, even before this 2010 paper was published. It is also clear that CIDNE was just an electronic clipboard for collecting and sharing standard ASCOPE/PMESII-PT information with as many units as possible (i.e., U.S. and other friendly).

At its most basic, the argument presented herein suggests that the U.S. military’s intelligence efforts in Afghanistan were focused predominantly on the enemy (the problem), when efforts should have been equally focused on knowing and understanding the civilian population in Afghanistan (the likely solution). We’ve been the hammer looking for the nail to pound *in*, rather than turning the hammer around and using the claw to pull the offending nail *out*. The paper acknowledges that tactical and strategic concerns overlap in the intelligence realm as well as on the battlefield. The authors argue for the need to collect and analyze population-centric information, including issues related to governance, development, and local populations (politics). They claim their overall approach would “have not only immediate, practical value, but also the potential to catalyze a more powerful, relevant, and holistic intelligence system” (p. 12). The authors use the example of the importance that Miami-Dade and Palm Beach

¹⁰ Source provided by COL (ret) Dennis Cahill.

counties played in the outcome of the 2000 presidential election (p. 11–12) to illustrate that COIN cannot be conducted at the regional level. Borrowing from the wisdom of Tip O’Neill (former long-term Speaker of the House), the authors conclude that “all insurgency [*politics*] is local.” The authors also argue that a central repository for data on development projects (who, what, when, where [map!], and why) would provide “an invaluable cache of practical information and lessons learned for next-generation project administrators, engineers, and military commanders” (p. 20).

Of note to the VAST team is the vignette in “Fixing Intel” that illustrates how digging a well for one tribe might cause trouble with another due to depleting the aquifer in one area in favor of another. “This is a problem well-known to water engineers the world over, but not necessarily to every executive agency or military commander operating in Afghanistan” (p. 20). This comparison nicely illustrates how power flows; it’s not always through “key leaders.”

The comparison leads one to realize that everything is an ecosystem, and military leaders must be aware that whatever pebble is cast into particular waters will create ripples far beyond the point at which it dropped. Because military forces focus mainly on kinetic ops (i.e., kill ‘em all and let God sort them out), its leaders are less inclined to seek out the more subtle power flows.

However, this paper provides a direct link between recent military goals and those of the development community. In reading this report again, even 7 years after it was first published, the arguments still make sense and the critique seems both logical and fair.

It should be noted that the term “Host Nation Information Requirements” makes an appearance in this 2010 document (p. 21). Speaking to the issue of the relationship between intelligence and CA is the following excerpt (p. 22):

Some intelligence officers contend that “white” topics are not Intel’s job but the responsibility of civil affairs and stability staffers – the CJ9. However, CJ9 lacks the analysts, training, and resources to systematically gather, process, and disseminate relevant “white” information.¹¹

Naturally, intelligence personnel seek to align themselves with the POINTY (manly) end of the spear. Things that are equally important to winning, but are seen as “less manly”—civil affairs and stability work (such as that done by nongovernmental organizations [NGOs], State Department)—in the minds of the Intel community, are consigned to those not directly supporting the tip of the spear.

The authors conclude with the following words (p. 23):

...the US intelligence community has fallen into the trap of waging an anti-insurgency campaign rather than a counterinsurgency campaign. The difference is not academic. Capturing or killing key mid-level and high-level insurgents – anti-insurgency – is without question a necessary component of successful warfare, but far from sufficient for military success in Afghanistan. Anti-insurgent efforts are, in fact, a secondary task when compared to gaining and exploiting knowledge about the localized contexts of operation and the distinctions between the Taliban and the rest of the Afghan population.

The authors also say that fixing Intel (p. 23, including boldface for emphasis):

...will require important cultural changes. Analysts must **absorb information** with the thoroughness of **historians**, **organize it** with the skill of **librarians**, and **disseminate it** with the zeal of **journalists**. They must embrace open-source, population-centric information as the lifeblood of their analytical work.

However, the authors miss the “analysis” element and the possibility that social science might aid in understanding.

¹¹ “Red” activity concerns the enemy (the overwhelming focus of C/J/G2 shops); “white” activity concerns (in this case) the Afghan population – economy, development, and governance/government.

The authors do quote GEN Stanley McChrystal (p. 24): “The [Afghan] conflict will be won by persuading the population, not by destroying the enemy.”

Source: Michael T. Flynn, James Sisco, and David C. Ellis, “‘Left of Bang:’ The Value of Sociocultural Analysis in Today’s Environment” *PRISM*, 3 no.4 (2012): 13–21

The authors of this article argue that because “failing to understand the human dimension of conflict is too costly in lives, resources, and political will for the Nation to bear” (p. 13), the Department of Defense Intelligence community must develop a “population-centric social radar” capable of “detect[ing] the precursors to political change, a “social radar” with a level of granularity, understanding, and confidence that enables policy leaders to make informed decisions that maximize national influence left of bang” (p. 14). They argue that once “tensions turn violent...options decrease markedly, the policy costs rise rapidly, and information becomes scarce and expensive” (p. 13–14). Throughout the article, the authors argue against retrenchment in the face of budget constraints, advocating (p. 21) that:

The Intelligence Community must develop and mature innovative capabilities that address the challenges of this new threat environment to provide nonlinear, holistic intelligence to decisionmakers and advance its analytic tradecraft. The social sciences, international marketing companies, polling firms, and others possess the data, knowledge, and expertise on foreign populations that the Intelligence Community lacks. By harnessing these assets more effectively and leveraging the capabilities of allies, the IC can in a relatively short period come to understand the key sociocultural constructs of relevant populations. By delving into critical questions, pathways, and indicators for those major and minor countries relevant to U.S. national security, the Intelligence Community can advance its own analytic transformation, deliver more powerful insights to customers, and better avoid strategic surprise. This will enable more effective diplomacy and better focused military activity to keep many budding conflicts left of bang or to more adeptly navigate the reconstitution of societies torn by conflict or natural disaster.

Source: MAJ Mark Herbert (U.S. Army), “The Human Domain – The Army’s Necessary Push Toward Squishiness,” *Military Review*, Sep-Oct issue (2014): 81–87.

In light of the Army’s embrace of the concept of the human domain and operations therein, and its reinvigorated recognition of warfare as a fundamentally human activity, Herbert advocates for the study of warfare from the social science perspective. He believes the underlying factors of warfare would be better explained by “intellectual constructs relying upon cultural anthropology, psychology, and sociology” than history (p. 83). He asserts the following (p. 83):

We must break away from the familiar think tanks and perfunctory advice from complacent experts regurgitating thread-worn theories and statistics. Instead, we must bring new fields of knowledge and information that draw upon diverse experiences and data sets. In short, if the Army is truly serious about understanding human interaction and its relationship with warfare then there has to be a concerted effort to reach out to these other fields of study that specialize in humanness in a more *hands-on* way.

Herbert recognizes the problem with this idea is twofold. The Department of Defense does not have a particularly good relationship with social scientists as a whole, and it has rarely engaged social science to aid in understanding warfare. He notes that where the military has engaged social science it has most often been “horribly misused” (p. 84). He advocates for the Department of Defense (DoD) to bridge the existing gap between itself and the social science community. He concedes the military must reach out to academia and begin to build bridges. His long-term goal for this collaboration is to foresee and prevent conflict. Herbert thus notes the following (p. 87):

Incorporating the study of the social sciences into the concept of the human domain will lead to profound change in the way the Army deals with conflict through a deeper synthesis of knowledge about ourselves and our social behavior. Conversely, academia could greatly benefit in its study of the sociological dimensions of human violence by professional association with those who conduct war first hand and have an intimate familiarity with it.

This article supports the VAST team's contention that social science—in particular cultural anthropology and sociology—can make significant contributions to military assessment and to understanding the human domain.

Source: Matthew J. Schmidt, “A Science of Context: The Qualitative Approach as Fundamental to Strategic Thought,” chapter 12 in *Exploring Strategic Thinking: Insights to Assess, Develop, and Retain Army Strategic Thinkers*, edited by Heather M.K. Wolters, Anna P. Grome, and Ryan M. Hinds, Research Product 2013-01 (Fort Belvoir, VA: United States Army Research Institute for the Behavioral and Social Sciences, 2013).

The publication in which this chapter appears is a compendium of papers exploring the various issues related to strategic thinking in the U.S. Army. Chapter 12 is written by Dr. Matthew J Schmidt and addresses the predominance of quantitative-over-qualitative approaches to understanding within the Army. Schmidt argues that quantitative methods are appropriate for tactical engagements and can inform strategic thinking. However, he argues that a qualitative approach is more appropriate when trying to answer questions with strategic implications.

In the author's own words, Schmidt argues the following (p. 220):

...military culture continues to conflate strategic thought with a flawed, quantitative/predictive model of the social sciences. The result is that when this inherently impossible predictive standard fails to be met, rather than question the basis of the model, strategic thinking that is self-critical about the military's approach is in turn suppressed. Thus a pseudo-scientific understanding of how qualitative research and analysis is done in turn perpetuates a model of pseudo-strategic thought. The challenge is to understand the basis of the quantitative/predictive versus qualitative/descriptive models of social science, their relationship to true strategic thought, and the organizational routines of the profession that hamper the establishment of a culture that recognizes and promotes such thought.

Moreover, the author concludes (p. 222):

The modern American military tradition is techno-scientific to the extreme. In practice this means that the American tradition is chiefly defined by its “systemic application of science and technology,” as a way to gain “complete predictability and centralized control over armed conflict” (Bousquet, 2009, p. 33).... The implication of this institutional commitment to the predictability model of the hard sciences is that it naturally privileges the quantitative way of knowing.

Despite the Army’s cultural preference for quantitative approaches to problem solving, Schmidt argues convincingly that the work of military strategists is more appropriately addressed through qualitative methods. In other words, war is a messy human endeavor not easily understood or solved by quantitative analytical methods more appropriately applied to the realm of hard sciences. The author notes the following (p. 223):

Unlike in physics where what was true about a feather dropped from the Tower of Pisa some half a millennia ago remains true today, in the world of social behavior what was true just yesterday is often not true today. Even in economics, the supposedly “hardest” of the “soft” sciences the inside joke is that economists are, “experts who will know tomorrow why the things they predicted yesterday did not happen today” (Flyvbjerg, 2005, p. 39).

CA (and intelligence) assessments are the mechanisms through which the Army understands the operational environment, including its civilian inhabitants. Unfortunately, the PMESII-PT x ASCOPE assessment methodology prescribed by doctrine suffers from the same problems that Schmidt identifies. The VAST team can mobilize the argument Schmidt makes about the usefulness of qualitative data in the strategic realm to make the case that PMESII-PT x ASCOPE is insufficient to arriving at an understanding of human behavior. Thus, the U.S. Army and its CA operations would benefit from strengthening their assessment process by incorporating both social science theory and methodology into the existing process.

Source: Matthew J. Schmidt, “War as Political Work – Using Social Science for Strategic Success,” *Military Review*, Jul-Aug (2014): 50–57

The author of this article holds a doctorate in government from Georgetown University and has taught at the School of Advanced Military Studies. This 2014 article is based on a report originally written for the

Army Research Institute's 2011 Strategic Thinking Initiative Conference (the proceedings of which the authors of this report believe appear in the publication described immediately above, despite its actual publication date of 2013).

Schmidt argues in this article that "War demands a qualitative mindset because war is a social phenomenon" (p. 51). A qualitative mindset requires a grounding in social science and its methodology. Unfortunately, while qualitative methodology "is essential to effective strategic thinking, it is contrary to the Army's dominant professional culture" (p. 51).

Schmidt (p. 52) explains to the reader that qualitative approaches:

...can be understood by their function and their form. First, the function of qualitative research is to interpret context—the interrelated conditions in which something exists or occurs. To interpret context means to understand conditions within a cohesive whole. Any categorization of conditions—including any statistical analysis, if appropriate—would be based on their relationship to the whole.

Moreover, "the problems of war and warfare, in reality, are not quantifiable problems of the hard sciences because they involve the behavior of human beings" (p. 53). The author acknowledges that there is, of course, a place for quantitative measurement and analysis in the military context. For example, use of quantitative measures to assess the skill of a unit in putting munitions on target is entirely appropriate because the determination of whether or not a bomb hit a target is not subjective. Unfortunately, there are no natural laws governing the motivations and behavior of adversaries, neutrals, and supporters. Schmidt's article explains the following (p. 56):

Policy makers and military professionals need to understand why people behave as they do because the strategic goals that military operations support involve changing human behavior. Human behavior is a product of what people think and feel and believe. Numerical measurements can indicate how many people feel or think or believe certain ways, but they cannot explain why. Strategic thinking is about answering those why questions...What matters is to understand how our enemies see their own actions as rational, and a qualitative approach is the only means of study to achieve that.

While the VAST team's effort is not focused directly in the realm of strategy, at least some of the questions that the military must ask in war or immediately afterward, as it works to stabilize the nation in which the conflict occurred, are why questions. Schmidt's article does explain to a military audience the value of social science theory and methodology in an operational context. His argument helps explain why PMESII-PT x ASCOPE is insufficient to the task of fully assessing the operational environment. Additionally, Schmidt's effort undergirds and justifies to military professionals, particularly those in CA and Intelligence fields, how the VAST team's enhanced assessment will be of value.

Source: MAJ Brian Hildebrand (U.S. Army), "Social Factors and the Human Domain," *Military Review* (May-June): 81–87

Hildebrand opens by reminding the reader that, at its core, war is a human endeavor. After a quick review of existing tools for mission analysis that are employed at various echelons within the Army, the author notes that the existence of so many tools and mnemonic devices is a testament to the complexity of the operational environment (e.g., DIMEFIL, PMESII-PT, METT-TC, SWEAT-MSO, ASCOPE, and AOKOC [Avenues of approach, Observation and fields of fire, Key terrain, Obstacles and movement, Cover and concealment]) employed at various echelons within the Army, the author notes that the existence of so many tools and mnemonic devices is testament to the complexity of the operational environment. He then argues that the human domain, being as complex as the operational environment, deserves "the same thoughtfulness, introspection, and analysis in order to understand it" (p. 90). He proposes using social factors to analyze and describe the human domain aspects of the operational environment. Specifically, he proposes using the following social factors: moral, religious-spiritual, social, political, economic, and aesthetic, which result in the somewhat unfortunate mnemonic, MRsSPEA).

He defines/describes each of the factors thusly (p. 93):

- Moral – Describes the sense of commitment, respect for others, value of dignity, and general concern for all living things.
- Religious-spiritual – Describes the value of the afterlife, reverence of the transcendental, need for spirituality, deference for truth, and sense of reciprocity.

- Social – Describes the relevance of community, the appreciation of good human relations, the value of hospitality, the high regard for family, and respect for authority and elders.
- Political – Includes a sense of equality, an appreciation for the balance between collectivism and individualism, and esteem for governance.
- Economic – Encompasses the value of free enterprise, economic security, fair distribution and equity, desire for wealth and growth, and regard of efficiency of work.
- Aesthetical – Explores the relevance of art in society: art as an expression of beauty, art as a tool for communicating, and art as a vestige of history.

Hildebrand notes that while these social factors have not yet been codified as an analytical framework within doctrine, “the Army has been working with these social factors under different auspices and through a variety of means” (p. 91). These means include but perhaps are not limited to country briefs, cultural studies, and comprehensive language classes. Without an actual framework that can be applied in a systematic and structured way, the commander may not fully appreciate nor fully understand information as it is currently being presented.

Hildebrand provides the reader with an example of how the Army might apply such a framework and concludes by arguing that MRsSPEA, as a subset of PMESII-PT, would facilitate mission command.

A trained sociologist likely will not think that the social factors, as Hildebrand has identified and defined them, would significantly enhance the Army’s understanding or the human domain. Nonetheless, it should be noted that he recognizes something significant is missing from the current assessment process.

Source: Victor R. Morris, “Complex Intelligence Preparation of the Battlefield in Ukrainian Antiterrorism Operations,” *Military Review*, Jan-Feb (2017): 58–65.

The author of this article argues the following (p. 58):

According to Army Techniques Publication 2-01.3, Intelligence Preparation of the Battlefield, an Army intelligence staff (1) defines the OE, (2) describes environmental effects on operations, (3) evaluates the threat,

and (4) determines the threat. The staff uses this four-step process to analyze certain mission variables in the area of interest for a specific operation. The mission variables analyzed are the enemy, terrain, weather, and civil considerations. The goal of Army IPB is to provide Army commanders and staffs the information necessary to develop courses of action and make decisions. The IPB doctrine states that all four of the mission variables—including civil considerations—and their interactions must be analyzed if the process is to be effective. Staffs must “determine how the interactions of friendly forces, enemy forces, and indigenous populations affect each other.” However, in practice, the process tends to emphasize the enemy rather than holistically integrate the civil considerations.

Building on an article by Tom Pike and Eddie Brown published in March 2016 on the Small Wars Journal website,¹² which introduced the concept of Complex Intelligence Preparation of the Battlespace (IPB) by using IPB as a nucleus and integrating concepts from complex adaptive systems theory, Morris suggests there is a more holistic way to understand the operational environment, specifically (p. 59):

Instead of primarily identifying and evaluating the enemy or the threat, the complex IPB process helps intelligence staffs analyze multiple groups and how they interact and collectively behave. Like the hybrid and dynamic threats it was developed to defeat, complex IPB combines conventional and innovative approaches that emphasize cultural and population factors, perception assessments, and analysis of nonmilitary actors in order to create a more accurate understanding of the OE. Therefore, complex IPB expands the core process to include sociocultural profiling, link and social network analysis, and computational agent-based models.

This article is illuminating because clearly its author, as well as authors Pike and Brown (on whose article Morris builds), sense there is something missing in the present approach to understanding the operational environment. The instinct of all three authors is to turn to linear thinking, quantitative analysis, systems thinking, and agent-based modeling to help describe and explain the human domain of the operational environment.

¹² Website: smallwarsjournal.com (Small Wars Journal facilitates the exchange of information among practitioners, thought leaders, and students of Small Wars, in order to advance knowledge and capabilities in the field.)

These are the very techniques, however, that the two Schmidt articles criticized for being inadequate to the task of understanding the context of the operational environment (see preceding reviews). The Morris article is helpful to the VAST team's efforts because it serves as the perfect example that confirms many, if not most, of the arguments made by Schmidt. It further illustrates that knowledgeable military personnel think the present means of assessment is inadequate.

The remainder of Morris's article is devoted to using the situation in Ukraine to illustrate the explanatory power of the approach that the author and a few of his sources advocate. It could be argued that Complex IPB is not the solution to the identified problem, but at least this article makes an attempt to provide a solution, however inadequate to the task.

Source: Brian M. Ducote, "Challenging the Application of PMESII-PT in a Complex Environment" (Fort Leavenworth, KS: School of Advanced Military Studies, United States Army Command and General Staff College, 2010).

This monograph argues that the linear methodology, inherent within the PMESII-PT construct, only successfully reveals the "what" but not the "why" of complex systems.

Ducote explains by writing the following (p. iii):

PMESII-PT restricts a holistic understanding of fundamentally asymmetric realms where U.S. military leaders currently operate. According to Jasmid Gharajedaghi in *Systems Thinking: Managing Chaos and Complexity*, complex environments exhibit characteristics of openness, purposefulness, multidimensionality, emergence, and counter-intuitiveness. Therefore, any form of inquiry designed to understand such an environment must address such aspects to convey meaning.

The author advocates incorporating identity theory and the proper use of the narrative as a more abstract means to fill the gap between PMESII-PT and other more holistic approaches. His solution is built on a foundation of systems thinking/systems analysis. More specifically, Ducote writes the following (p. iii):

Rather than using a linear and predefined list of variables, like PMESII-PT, users of the more abstract approach will apply a more generic form of

inquiry to ascertain the why and not simply the what of an environment. In an effort to ascertain a holistic understanding rather than a detailed familiarity, the method of inquiry uses the more conceptual dimensions of wealth, truth, beauty, values and power of complex environments as a general framework. Instead of using specific categories to fill in answers, the proposed approach guides users to ask questions about these very foundational social facets. Applying an iterative and meta-cognitive form of inquiry that asks questions about the essence of the environment in the quest to convey meaning, the proposed approach should be able to lead users to a holistic understanding as opposed to just a substantial increase in knowledge about a complex environment.

Viewed through the lens of social science, the methodology proposed does not appear to provide an adequate or even reasonable approach to surmounting the problems inherent in the PMESII-PT x ASCOPE analysis of the human domain aspect of the operational environment. Like other authors, Ducote identifies inadequacies in the present methodology but immediately falls into the organizational culture trap that privileges all those things Schmidt took issue with in the two publications summarized above (e.g., linear thinking and over-reliance on predictive modeling and quantitative methods). This article is yet another attempt to address the fundamental flaws identified in the existing PMESII-PT construct and its associated assessment methodology.

3 Conclusions

The articles in this annotated bibliography reflect military members' attempts to understand why the ASCOPE x PMESII-PT assessment methodology for the human domain has proven inadequate and their recommendations for its improvement. Their observations and recommendations are invaluable to researchers who are working to improve the Army's understanding of the operational environment by applying social science theory and principles. The critiques and recommendations of these authors are invaluable, especially given these authors' operational experience in applying assessment doctrine.

Any critiques placed in the annotations here are aimed at the ideas presented rather than at the authors; any critiques are intended to be constructive and in service to the report authors' goal of improving U.S. Army assessment of the human domain.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

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1. REPORT DATE (DD-MM-YYYY) December 2017		2. REPORT TYPE Final Special Report		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Military Critiques of the Current Assessment Process for the Human Domain – An Annotated Bibliography				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER T45	
6. AUTHOR(S) Judith M. Vandrzyk, Lucy A. Whalley, and George W. Calfas				5d. PROJECT NUMBER BHCF09	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Engineer Research and Development Center (ERDC) Construction Engineering Research Laboratory (CERL) PO Box 9005 Champaign, IL 61826-9005				8. PERFORMING ORGANIZATION REPORT NUMBER ERDC/CERL SR-17-17	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Assistant Secretary of the Army for Acquisition, Logistics, and Technology 103 Army Pentagon Washington, DC 20314-1000				10. SPONSOR/MONITOR'S ACRONYM(S) ASA(ALT)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT The Army increasingly recognizes the importance of the social systems in the conduct of operations abroad. However, the current standard Army frameworks and practices make no attempt to understand the social power dimensions of the human domain. This report provides an annotated bibliography of a subset of sources identified in the process of reviewing literature for the Vulnerability Assessment Software Toolkit (VAST) project. This literature review identifies articles written by current or former members of the military who constructively critiqued or otherwise offered suggestions intended to improve the Army's human domain assessment process.					
15. SUBJECT TERMS Sociology, Military; Power (Social sciences); Social ecology; War and society; Vulnerability Assessment Software Toolkit (VAST)					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 35	19a. NAME OF RESPONSIBLE PERSON
a. REPORT Unclassified	b. ABSTRACT Unclassified	c. THIS PAGE Unclassified			19b. TELEPHONE NUMBER (include area code)