A New Hope? Overcoming the Limitations of Effects-Based Operations

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A paper submitted to the faculty of the NWC in partial satisfaction of the requirements of the JMO Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.

Effects-Based Operations as a "new" concept is entering its sixteenth year of notoriety. Its emergence following the Gulf War (1990-1991) heralded the beginning of a shift in focus from fighting attrition warfare against a large conventional adversary to operations that generate effects. The purpose is to create a synergistic operation resulting in a desired effect—kinetic or psychological—that limits casualties on both sides, as well as collateral damage to the surrounding area. In today's construct, we analyze the operating environment as a system within a system, with the resulting operations targeting either the nodes (person, place or thing that is a system component) or linkages (relationships between nodes) of these systems with a desired end state of capitulation.

Effects-Based Operations, Gulf War, Joint Forces J9

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by

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INTRODUCTION

Effects-Based Operations as a “new” concept is entering its sixteenth year of notoriety. Its emergence following the Gulf War (1990-1991) heralded the beginning of a shift in focus from fighting attrition warfare against a large conventional adversary to operations that generate effects. The purpose is to create a synergistic operation resulting in a desired effect—kinetic or psychological—that limits casualties on both sides, as well as collateral damage to the surrounding area. In today’s construct, we analyze the operating environment as a system within a system, with the resulting operations targeting either the nodes (person, place or thing that is a system component) or linkages (relationships between nodes) of these systems with a desired end state of capitulation. Continuous assessments must be made in order to measure the effectiveness of operations and to provide the commander with options leveraging the full range of military and non-military capabilities.

The analysis of the environment and measurement of effectiveness are the components of Effects-Based Operations (EBO) most often attacked by critics. In his criticism of the original Rapid Decisive Operations White Paper produced by the Joint Forces J9, Lieutenant Colonel Antulio Echevarria II, U.S. Army, claimed that EBO relies on the intelligence community to provide the commander with complete knowledge of the enemy, knowledge, he contends, the intelligence community is incapable of providing. Other critics believe breaking down the enemy as a component of a system of systems is too simplistic. They argue cultural and psychological nuances are too complex to be divided within the Operational Net Assessment’s sub process, System of Systems Analysis (SoSA). The current issue of Iraq, where the enemy has not built its operations around a tangible center of gravity,

has become a rallying point for these critics. It is often claimed that fighting insurgency is much more complex than fighting a conventional force, and, therefore, too difficult to deconstruct in SoSA. Because insurgent strategies focus on preventing the military engagements from becoming decisive while emphasizing operations aimed at the psychological and political aspects of society, insurgencies differ vastly from conventional warfare.\(^2\) Insurgencies often have a heavy cultural influence or ideology rather than a military doctrine to which they adhere, Maoist Insurgencies notwithstanding.

In the face of these assertions, can these limitations of EBO be overcome? Is the System of Systems Analysis inadequate to suit the commander’s needs in unconventional warfare? The problem stems not from the system itself, but in its application by individuals without a clear understanding of the elements within SoSA as they apply to the various environments where we are operating.

**SCOPE AND METHODOLOGY**

The intent behind this paper is to provide the commander with additional considerations in the analysis of the operational environment, considerations outside the normal scope of military expertise that I believe have not been fully leveraged in the past. Commanders should demand their intelligence professionals exhaust every available resource in order to gain an understanding of the environment and the systems that construct that environment. No outsider will ever be able to have perfect knowledge of an alien cultural environment, but in the SoSA we can gather a much deeper understanding of the environment to better identify the effects we wish to create and the manner in which we wish to create them.

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To that end, this paper focuses on the primary method of conducting SoSA, PMESII (Political, Military, Economic, Information, and Infrastructure) and attempts to identify where our military expertise is lacking in the analysis of the sub-component systems. It then goes on to recommend a course of action to aid in the analysis of these sub-component systems.

**SYSTEM OF SYSTEMS ANALYSIS**

“Know the enemy and know yourself; in a hundred battles you will never be in peril.”

While Sun Tzu’s pearls of wisdom often fall into the “No kidding,” realm, it seems we have been guilty in recent operations of not knowing our adversary as well as we could. The effects we have generated, especially in phase four operations in Iraq, have been negative more often than they should be. This is, in part, due to a failure to truly understand the operating environment. In the past four years, great effort has been made to address cultural impacts on operations, and emerging doctrine has reflected our realization of this need. SoSA has evolved as a dissection of the elements that make up the environment, and it is done in support of the Operational Net Assessment (ONA) for each operation. ONA is defined as, “A continual, collaborative process among a cross-disciplined team of experts in the form of a coherent, relevant, and shared knowledge base and can be used as a tool for planners and decision makers in order to focus capabilities when, where, and however needed to achieve decisive effects.” Then, the intent of the ONA is to “create a holistic

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understanding of the operating environment.”

The primary model for SoSA is PMESII. Each sub-component is analyzed individually, and then the system is analyzed as a whole. After the analysis, the commander is provided with courses of action to support the desired effect(s).

Unfortunately, as Captain Mark Simpson, U.S. Navy, points out, we have yet to define the true subcomponents of PMESII, and Joint Pub 2-0 fails to even mention it. No doctrine exists that describes how to analyze the sub-components of PMESII. So it comes as no surprise that it is in the analysis where we begin to see the mistakes in the process.

First, the Joint Warfighting Center’s (JWFC) definition of ONA mentions a cross-disciplined team of experts. Who are they? More often than not, these experts come from the intelligence community and have some rudimentary understanding—mostly historical—of the culture in which we wish to do operations. They are by no means well versed in dissecting the functional components of a society. For a military adversary, these experts are more than qualified. Using doctrine and training to determine enemy order of battle is something our intelligence community has become proficient in over the last several decades. Unfortunately, we no longer face the Soviet menace. Our current and future adversaries do not have established doctrine, nor do they adhere to a predictive order of battle. Our enemies have evolved; our intelligence community, as a whole, has not. So we get their analysis of the sub-systems which is limited to our own narrow view of how these systems operate in a Western society.

Under PMESII, the first sub component in the model is Politics. In many non-Western cultures the “Warlord” governs his people by force. He is not a recognized leader in

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7 Joint Warfighting Center, Joint Doctrine Series Pamphlet 3, *Doctrinal Implication of the Standing Joint Force Headquarters (SJFHQ)* (Norfolk, VA: 2003), 4
the United Nations, he has no diplomatic ties with the greater global community, yet he does provide a semblance of structure to that particular region. He may not even be in power at the discretion of his nation’s government. Like it or not, we must recognize his role in his society. General Anthony Zinni, in an address to the Central Intelligence Agency about operations in Somalia claimed that, from a Third World perspective, the U.S. State Department’s policy to “Isolate, marginalize, and minimize Adid,” equates to declaring war on him. Since Third World leaders often do not understand or practice our diplomatic subtlety, the unintended effect of that policy gave Adid more ammunition against the coalition effort. In the past, our more insular view of politics would make us believe that negotiations with a man like Adid would offer him legitimacy where he deserves none. The problem with this view is, to his people, he is legitimate. Western ideas do not apply in an environment where thousands of years of tribal infighting hold sway. Nor does the equation of a “Warlord” to a Junta government apply because often the “Warlord” is the head of a tribe through heredity or has conquered several tribes to assume his position. To understand the politics of the Third World, we must suspend the Western norms during analysis.

Under the military sub-component an insurgency has few of the traditional elements that fit into what we think of as a military. They often have leadership, but not in the manner in which we are accustomed. Likewise, their armed forces, security apparatus, and sustainment exist, but are only in the remotest sense similar to our own or our traditional adversaries. Militias in Iraq are a perfect example. There is a growing population of these groups in Iraq. Some operate alongside the Interior and Defense Ministry troops; others operate without any official sanction, but with tacit approval by political parties formed along

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sectarian lines. The sub-component Military does not always preclude para-military organizations, but, in some parts of the world, these units are the only recognized martial force available. Understanding and accepting the comparison between traditional militaries and these martial groups—though it might be heresy to call it such—is difficult, but difficult does not mean impossible. The problem lies in the glacially slow movement away from preparing to fight a large conventional force toward a flexible definition of Military in the PMESII model.

The Economic sub-component is perhaps the most easily defined, but here again we encounter our narrow view of the concept. The legitimate economy of Afghanistan is nonexistent. So the prolific growth of poppy to support the opium trade provides the farmer with the means to supply the Warlord with capital to buy more weapons, build his militia, and enforce his rule over his local area. This is more than illegal drug trade. To these people, it is a legitimate means to provide for their society, and it pervades nearly every facet of their culture. To target it without a viable alternative already in place results in further economic decline and creates an adversarial population. In more primitive cultures, economy is more than just the allocation of scarce resources to satisfy wants. The entire social structure of these communities evolves around the limited resource. Myths and Religions have evolved out of this singularly important component in agrarian societies. As these societies advanced, the possibility of a surplus in crops came along, but to realize this potential surplus, leaders promulgated an ideology that pushed farmers to produce more than they could consume, then persuaded the farmers to donate that surplus in the form of a sacrifice to a god, priest, or other religious figure. Politics and social pressures have

11 Bakhtiyorjon U. Hammidov, The Fall of the Taliban and Its Recovery as an Insurgent Movement in Afghanistan (Fort Leavenworth, KS: 2004), 33
sometimes succeeded in achieving this, but not as effectively as a system of beliefs providing the populace a requirement from the supernatural. Simply classifying Economics in these environments as the management of scarce resources will lead to an inevitable, unintended effect by minimizing the true importance of that economy. It is not always about the Gross Domestic Product.

The Social sub-component is the most complex and difficult to nail down of all the subcomponents of the SoSA model. It is also the sub-component our intelligence community, as it is currently structured, is least able to analyze with any real degree of competency. For example, the various tribes within Iraq provide the impression of a disorganized collection of squabbling hierarchal units. On the surface this is true, but the tribes have a unique ability to set aside differences to face a common threat. The Arab proverb, “’I and my brothers against my cousin; I and my brothers and my cousins against the stranger’ (or ‘against the world’)” provides us with a glimpse of this unique relationship.¹²

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Figure 1 illustrates the loose organization of Tribe A controlled by a Sheik. If J and K are at odds, they will set aside their differences to fight D as an element of E. However, D and E will stand together against C. The entire tribe will organize to combat any threat to A, regardless of their current relationship. The Sheik is often engaged in arbitrating disputes between lower echelons of the tribe, but he also allows them to continue in order to maintain his power as feudal European leaders often did. Our intelligence assessment of Iraq assumed that “decapitating” its leadership in the form of Saddam Hussein would allow for ease of transition to a new regime. However, Saddam had used the tribes to operate many of the state functions. A quote from a young tribal leader sums up how important the tribe is to the Iraqi people: “We follow the central government, but of course, if communications are cut between us and the center, all authority will revert to our sheik.”

The tangible nodes of Myth, Religion, History, Language, Arts, Social Hierarchy, and many others comprise the base elements of any given society. How they evolve into present day forms is the study of Anthropology. This is not a discipline normally embraced by the military, and certainly not common in the operational commander’s planning staff. Understanding the dissection of cultures to any degree of relevance takes a significant investment in time and immersion to achieve. JWFC Pamphlet 4 identifies the need for a common ONA database that would aid the commander’s staff in their analysis. As Captain

14 Bakhtiyorjon U. Hammidov, *The Fall of the Taliban and Its Recovery as an Insurgent Movement in Afghanistan* (Fort Leavenworth, KS: 2004), 51
Simpson points out, though, JWFC Pam 4 was published in 2004, and to date, no such database exists.\textsuperscript{17}

Information is the new super weapon, and we are considerably behind the adversary in the use of it. Though the available doctrine on using information as a tool for generating effects exists, we are still lacking in crafting the proper message for the cultures we are targeting. The Joint Publications 3-13, \textit{Information Operations} and 3-53 \textit{Psychological Operations}, place considerable emphasis on using information to create effects. There is even a recurring mantra of getting the “right” message to the “right” audience. What neither of these publications adequately addresses is where to go to obtain an understanding of the way the message is received by the targeted audience. In Iraq the questionnaire is often used as a tool for crafting the Information themes, and it is an effective one. Gaining a large enough and diverse enough response to these questionnaires for them to be useful, though, proves problematic. The adversary’s reaction to our operations sometimes nullifies our actions altogether. Before the beginning of Operation Iraqi Freedom, the traditional, “Pro-American,” leaflets were dropped on the people of Iraq. The Hussein regime severely punished anyone possessing one of these leaflets and even began a rumor that they would drop leaflets of their own mixed with Anthrax to test the Iraqi people’s obedience.\textsuperscript{18} We struggle constantly to craft a usable message to reach the people, while the enemy is one of the people. He understands what touches the hearts and minds better than we do and is more able to present his case of injustice to them in a manner that is convincing and acceptable.

\textsuperscript{17} Ibid., 3
“The Islamic world is poisoned by false, but wonderfully comforting information.”\textsuperscript{19} This is a rather astute statement from Ralph Peters. Misinformation in the Islamic world, whether accidental or contrived, is rampant. The sources of misinformation are not always adversarial, but often contribute to the objectives of our adversaries. It comes from clerics, politicians, and the media, among others, and as far as the masses believe, it is fact almost before it is completely out of the mouth of the individual making the statement. To effectively counter misinformation, or disinformation, we must understand the root of its acceptance within the population. Additionally, we must get past the Western naiveté of believing we can use logic and example to alter deep-rooted hatred or perceptions. Many of the people we target with IO themes of “Americans are your friends,” will not accept that, no matter how many pictures of American Soldiers or Marines playing with Iraqi children, or slides depicting the number of schools we have built, or hospitals we have improved, we provide them.\textsuperscript{20} Then what is the message we need to convey? Who can best help us to develop this message and deliver it to the people? I am certain these questions keep IO planners and PSYOPS planners awake at night.

Often, we have made the mistake of parceling out planning for cultural impacts as a function of Civil Affairs.\textsuperscript{21} This occurs most often at subordinate commands, but reinforces the lack of understanding of its real place in the operational environment. The expertise in the Civil Affairs world, while maintaining a more informed cultural awareness, lends itself more to the support of the Infrastructure node, than the Social node. In this node, we must discover what key elements of Infrastructure within the environment can affect the largest

\textsuperscript{19} Ralph Peters, \textit{When Devils Walk the Earth}, (The Center for Threats and Emerging Opportunities, Quantico, VA: 2004), 12.
\textsuperscript{20} Ibid., 11
population. In Afghanistan, the Provisional Reconstruction Teams are often engaged in well-digging. Wells are key infrastructure in an undeveloped world, and vital to the sustainment of life, economy, and political power in some cases. These small, primitive (by Western standards) communities are less concerned with trash removal, radio towers, and democracy, than with survival. Our “philanthropy” is often taken advantage of by shrewd local leaders who exploit our lack of cultural understanding. An excellent case in point is the actions of the U.S. Army Engineers in Djibouti in 2005. Within the city of Djibouti is a public fountain that in years past was built for function as well as aesthetics. Our engineers took it upon themselves to clean, repair, and reactivate the fountain in an attempt to foster support by the locals for our presence there; once the fountain was operational and could be used again, the locals began to point out other “key infrastructure problems” that needed immediate attention. In their eagerness to be seen as helpful, our engineers became, in effect, the village handymen. This freed the population from any requirement to repair their own infrastructure, and they were free to sit around all day enjoying the effects of khat, a stimulant that produces feelings of euphoria. Because we place value on an item that we consider relevant infrastructure does not mean it is relevant in the Third World. In contrast, there are common elements in the more developed Third World. Electricity production in more developed areas such as Iraq, for example, is just as important to the Iraqi people as to the Western world. We recognized the need early into Phase Four, and we have even worked to restore it throughout the country. The issue comes from targeting electricity production in Phases Two and Three without recognizing the resulting animosity and propaganda from an insurgency following the end of major combat operations. More communities without power give rise to a greater disenfranchised population. In considering power plants as a target to
reduce the Iraqi military’s capabilities, the cost and difficulty of restoring this vital
infrastructure was undervalued. This is certainly an undesired effect, not properly accounted
for by the planners conducting the PMESII analysis at the outset of Operation Iraqi Freedom.

**CONCLUSIONS**

There is a definite shortfall in the military intelligence apparatus in deconstructing the
sub-components of a cultural system. The intelligence community is made up of capable
individuals, but their expertise, based on decades of Cold War planning, does not lend itself
to the type of cultural intelligence we need in order to truly determine what makes these
cultures and subcultures tick. The expertise required to do that takes more than a new line in
a Joint Publication, or an elaborately worded mission statement from a recently created
military think tank. Our reliance on the professional competence of individuals in their
respective fields leads us down the path of taking intelligence estimates as fact, and it should
be. These professionals have served us well for decades. They helped bring down the Soviet
Union, achieve an overwhelming victory in Panama, the Gulf War, and operations in
Albania. Now we are asking them to provide us with products they have never been properly
trained to create.\(^\text{22}\)

The expertise we need is not normally found within the martial disciplines.
Anthropologists, psychologists, sociologists have been leveraged to create briefs for our
planners and our intelligence community, but have not taken a more active role in the
designing of operations. The level of experience and training these assets possess cannot be
adequately conveyed in 10, 100, or even 1000 slides in a Powerpoint presentation. The
integration of these disciplines and individuals into our planning process has not been done to

\(^{22}\) James B. Ellsworth, *Refocusing the All-Seeing Eye: Intelligence Support to Effects-Based Operations*, (Navy
War College, Newport RI: 2003), 9
the degree that would lead to relevant results. Our intelligence professionals study the
products of these disciplines, but that does not qualify them to make predictive assumptions
of an adversarial or friendly culture. In dealing with the people of Saudi Arabia, I found Dr.
Raphael Patai’s book, The Arab Mind, tremendously useful to understand how Arabs
interacted. Reading his book did not make me an expert. Dr. Patai was the expert, but he
spent a lifetime studying and living in the Arab world. He spoke their language, understood
their jokes, and felt the sting of their insults. This level of expertise cannot be conveyed
through coursework alone. Of course, no cultural expert, psychologist, or even a member of
a particular culture can offer a commander certainty in predicting primary, secondary, and
tertiary effects. They can, however, provide the commander with a level of understanding
currently denied him by the current intelligence construct. As Captain Simpson states,
“professional anthropologists may provide important link and nodal analysis expertise and
capability in a system-of-system approach to ONA and PMESII analysis.”23

Additionally, the proposed ONA Database mentioned in JWFC Pamphlet 4 has yet to
come into being.24 A functional, collaborative database of this type will take years to
complete. It will almost certainly be ineffectual in the beginning, but it will be instrumental
to the success of future operations in non-Western cultures. A culture can seldom be broken
down into some mathematical construct that will spit out the “right” answer when
determining or predicting effects, but that does not make it less valid for a planning baseline.

As a band-aid, the military has implemented cultural awareness training across all
services in order to help prevent unintended consequences. The creation of the Multi-Service

24 Joint Warfighting Center, Joint Doctrine Series Pamphlet 4, Doctrinal Implications of Operational Net
Assessment, (Norfolk, VA: 2004), 9
Tactics, Techniques, and Procedures for Cultural Impacts on Tactical Operations is a representation of the importance we place on culture, and it has several pages outlining the “do’s and don’ts” in dealing with people of foreign cultures and operating alongside coalition partners. This is a useful tool at the tactical level. At the Operational and Strategic level, the awareness of cultural impacts has more important implications. Failure to truly understand the environment at these levels of war can, and most likely, will lead to a failure to achieve the Strategic Objectives, regardless of how well we fight at the tactical level.

**RECOMMENDATIONS**

Simply put, we need to leverage the expertise of the necessary disciplines such as anthropology, psychology, and sociology; we need to begin to cultivate our own experts in these disciplines; we need to begin building the ONA Database that deconstructs the cultures in which we are already conducting operations; and we need to emphasize the interagency process in this collaboration.

For the near-term, we must utilize the academic world for much of this expertise as such skill is not something that develops overnight. We may not be able to attract the leading anthropological expert on the Iraqi culture, but any trained anthropologist will be better qualified to help us dissect a culture than a layman. There is often considerable reluctance on both sides to integrate, but the benefits of such collaboration are immeasurable. The law enforcement world has long utilized profilers to augment their investigative process. These profilers help to gain insight into the subject’s activities, as well to as predict further behavior. This is not a common skill in the psychological or psychiatric world, but the training for such individuals already exists. The military already employs mental health professionals, and with some additional training, they could be utilized in this role for
operational planning. We should begin to build our own experts in anthropology as soon as possible. Cultural experts will take some time to develop, but the payoff is worth the investment. The groundwork for such an attempt is already in place. Our junior officers now have more time living and operating among truly different cultures than at any time in recent history. They have seen how the culture operates around them; we need to train some of them to understand why they operate in such a manner. Educational incentives and promise of employment have lured people to the military for years. These young officers already understand and accept the military structure; they would be best suited in the long run to serve as our experts rather than an academic. Some will argue that our Foreign Area Officer program already provides us with experts on countries around the world. These officers are given language training and a short indoctrination on the area they are to focus on (consisting mainly of political leaders, some history, and different factions within foreign governments). They rarely spend significant time immersed in the cultures for which they are an “expert.” I am not dismissing their value, but they are not the source of the necessary expertise.

Building the ONA Database must be a collaborative, continuing process. Much of the work already exists. As mentioned above, Dr. Raphael Patai made studying the Arab world his life’s work. He published numerous works on this one culture, and he taught countless other experts on the subject. *The Arab Mind*, breaks down the Arab culture along the lines of PMESII, although, it does not mirror PMESII exactly, it should be required reading for all officers and senior non-commissioned officers. Ralph Peters’ article, *When Devils Walk the Earth*, seeks to explore the terrorist sub-cultures. His discussion of the Apocalyptic Terrorist and the Practical Terrorist and the differences of their operations and beliefs is a valuable starting point for understanding their nature. It may not be widely
accepted as an exacting analysis, but at the very least, it serves as a starting point in the analytical process.

Finally, the interagency process should be leveraged to the maximum extent possible. This should be a “no-brainer,” but as it is often discussed, interagency exists only in the word and not the deed. There may be cultural and psychological expertise within the other agencies that the operational staffs have been unable or unwilling to tap into in utilizing SoSA. I realize “Leverage the Interagency” has become a tired theme that has seen little to no practical application in most operations, but it is vital to the success of current and future operations.

The intelligence process is inherently iterative, and the short-run analysis will be built upon infinitum. We need to create the conditions for a suitable starting point in this analysis in order to provide the operational commander—current and future—with the most accurate assessment available. Making the commander the cultural expert is not the point of this paper; creating a reliable pool of true experts to provide him the necessary information is. The impact of an assessment made by true experts could be immeasurable, and it could provide us the key to unlocking the path to victory.
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