

Effects-based Operations: More Important Than Ever

TOMISLAV Z. RUBY

Whether effects-based operations (EBO) and the effects-based approach to planning have led to negative warfighting results is a topic well worth our collective time and study. In fact, it is a healthy activity of any defense institution to question and evaluate its doctrine, policy, and procedures. The current debate on EBO brought about by General James N. Mattis's memorandum to US Joint Forces Command (USJFCOM) directing the elimination of the term from the command's vocabulary has not put the issue to rest.¹ Quite to the contrary, the Mattis memo reinvigorated the debate, and this article aims at being part of that debate. Effects-based operations are not dead. No one individual can kill a concept, and this concept has staying power. When the underlying rationale for General Mattis's decision is analyzed, one can see that EBO as a concept for planning will be around for some time.

Desired effects are nothing more than desired results from the actions we take in support of objectives and guidance. Commander's intent adds the nuance and context necessary to fine-tune execution in support of desired effects. So the question to General Mattis should be, "Given that effects are nothing more than desired results, how can we possibly extricate effects from the planning process?" Rather than abandoning the concept of EBO, USJFCOM should move to create a change in the organizational culture of the US military away from accepting inefficiency as long as there is overwhelming power. This is where USJFCOM can make its greatest contribution to furthering joint warfighting.

General Mattis makes an impassioned assessment of EBO and directs that USJFCOM "will no longer use, sponsor, or export the terms and concepts related to EBO." He says that Joint Publication (JP) 3-0 and Joint Publication 5-0 "must be further refined to comply with the guidance con-

tained in this letter.”² Fortunately for the US services, this is not possible by fiat. Joint doctrine follows a very deliberate, corporate process that is not owned or directed by any single organization. And that is good, especially given the numerous methodological problems in the commander’s directive.

Some of General Mattis’s assertions are totally correct but unrelated to EBO. For example, paragraph 3 in the memo states that future operations “will require a balance of regular and irregular competencies. Second, the enemy is smart and adaptive. Third, all operating environments are dynamic Fourth, we are in error when we think that what works (or does not work) in one theater is universally applicable to all theaters.” All these points are completely in keeping with EBO and do not in any way discredit it. An even greater logic gap in this paragraph occurs when the general inserts a completely unrelated Sherman quote and an unjustified lumping in of EBO with “examples” that deny confidence without actually citing any examples.

General Mattis’s guidance letter asserts that EBO:

- Assumes a level of unachievable predictability.
- Cannot correctly anticipate reactions of complex systems.
- Calls for an unattainable level of knowledge of the enemy.
- Is too prescriptive and overengineered.
- Discounts the human dimension of war.
- Promotes centralization and leads to micromanagement.
- Is staff, not command, led.
- Fails to deliver clear and timely direction to subordinates.
- Uses confusing terminology and is difficult to understand.³

Regarding the first three points, all of which influence operations (kinetic or not) and seek to predict reactions based on knowledge of the enemy, what other option do we have? Our planning process demands we know as much as possible about the enemy if we are to develop actions to influence reactions, regardless of the complexity of the target. We do not set an artificially lower goal for our intelligence needs just because we know we will not be able to receive everything we ask for. And we certainly will not amend our courses of action (COA) just because we are not certain that they will achieve

Colonel Tomislav Z. Ruby is Chief of Doctrine for the Deputy Chief of Staff for Intelligence, Surveillance, and Reconnaissance, Headquarters US Air Force. He has served in operational assignments and deployments, including Operation Desert Storm and the Multi-National Force-Iraq staff. He is a graduate of the USAF Weapons School and holds a master’s degree from the National Defense Intelligence College and a Ph.D. from the University of Kentucky.

100 percent success. Planners and strategists ask for all of the intelligence they can get and consider every possible COA with the intent of creating behavior-modifying effects. Using EBO has not raised the planning threshold any higher than the traditional military decisionmaking process (MDMP).⁴

The remaining bullets are completely unsubstantiated. There is nothing in history to substantiate, even in part, these assertions. And if EBO practices are prescriptive, what does that make the Army's formal planning process? These assertions assume EBO is a thing, a checklist that is outlined somewhere in doctrine. It is not. Some planners and commanders may use varying terminologies, but that does not invalidate the original concept. If individuals think of EBO as a silver bullet, then they misunderstand the concept. Such an understanding does not, however, invalidate the concept. Effects-based operations do not advocate single-service approaches. They do not prevent joint operations or the utilization of ground forces. They do look for approaches in lieu of large formations of massed ground forces, unless such forces are deemed to be the best and most effective means to achieve an end. Effects-based operations are presented in General Mattis's memorandum as "mechanistic," even though they do not follow any checklist. On the other hand, the military decisionmaking process defined in doctrine is prescriptive and does follow a set checklist.⁵ The issue is not which methodology is better. MDMP is a process; EBO is a conceptual approach.⁶ The differences are profound and fundamental.

General Mattis repeatedly refers to the Israeli-Hezbollah conflict in which it is assumed that the Israelis failed to follow a too-complicated EBO concept. Unfortunately for Israel and EBO detractors, Hezbollah did follow EBO concepts to achieve their desired effects. If the Israelis failed, it was in not determining what the desired effects were and developing a strategy to attain them.⁷

General Mattis seeks "to reduce friendly friction rather than to inject difficult-to-understand terminology and processes that demand increasingly large staffs to access effects." It is sad to believe senior leaders give so little credit to officers and enlisted personnel to believe they do not understand the linkages between actions and results. Larger staffs may result in perhaps several hundred additional individuals sent to a war. But is this not better than planning for large ground formations from the very beginning? Did not the US-led Coalition overthrow the Taliban with a larger staff and fewer forces in the field? Did not NATO achieve strategic effects in Kosovo without the need to spill soldiers' blood on the battlefield? And did not 40-plus days of precision bombing in 1991 cut off the Iraqi Army from their communications, leadership, and logistics so that when General Schwarzkopf ordered ground forces to advance, Iraqi Army units surrendered en masse to unmanned aerial vehicles (UAVs), helicopters, and individual soldiers?

“Desired effects are nothing more than desired results from the actions we take in support of objectives and guidance.”

General Mattis’s proposed replacement for his own command’s *Commander’s Handbook for an Effects-Based Approach to Joint Operations* (dated 24 February 2006) is the new *Army Commander’s Appreciation and Campaign Design*, published 28 January 2008. This document posits that operations are made up of complex operational problems, each of which is idiosyncratic. Thus it is impossible to predict effects from individual actions.⁸ What doctrinaires at US Army Training and Doctrine Command argue is that there cannot be consensus as to the structure of problems; if you are capable of solving one, another is revealed. In possibly the boldest statement in the document, Army authors state there is “no objective measure of success and different stakeholders may disagree about the quality of a solution.”⁹ If this is true, then short of massive land wars with an enemy formally capitulating to unconditional terms, one should not undertake military operations since you can never agree as to what constitutes success in an operation.

This line of thinking is shallow. It disregards evidence in multiple fields of study from politics to sociology which seek, in the very words used in TRADOC Pamphlet 525-5-500, what is systematic in human affairs. Certainly we can never be certain of an outcome, but we can predict based on evidence of what inputs may result in what outcomes. To do otherwise is to blindly place one’s hope in commander’s intuition, something that cannot be modeled or measured. What if a commander’s intuition is wrong? Would we call for finding new commanders, or improving their intuition? If so, how?

The EBO characteristics that General Mattis refers to in the memorandum were a “strawman” no longer reflecting any official (read Service) position. The general is taking exception with his very own USJFCOM early incarnations of EBO that were based on optimistic assumptions. Assumptions founded in the belief that a party can transpose systems analysis from an infrastructure focus to one dealing with more esoteric arenas (political, cultural, and economic relationships; enemy motivations or will). That incarnation is gone. Indeed, the latest JP 3-0 and 5-0 take a much more circumspect position with respect to EBO. General Mattis is also critical of the system of systems analysis (SoSA), which some

confuse with EBO. What is interesting in this regard is the fact that the Joint War Fighting Center (as well as some of the defense intelligence entities) are heavy into SoSA as an analytical tool to help with intelligence preparation of the battlespace. SoSA is not perfect and our understanding and mapping of complex adaptive systems will always be something less than perfect, but the analysis effort pays dividends in helping understand the enemy. Indeed, TRADOC Pamphlet 525-5-500 states in paragraph 1-2.a., “Commanders must approach operational problems from a holistic systems perspective.”¹⁰

Senior officers have witnessed planners and commanders in Operations Allied Force, Enduring Freedom, and Iraqi Freedom using the concept of EBO as an excuse to strike small, difficult-to-justify targets based on limited intelligence rather than targeting vulnerable and exposed centers of gravity, in the hope that these strikes might achieve desired effects. Although such actions may be perfectly logical, they are sometimes entirely ineffective. Perhaps some of the frustration with EBO stems from an unrealistic expectation to exceed the standards outlined in the law of armed conflict. Otherwise planners and commanders are required to take more time and target along the periphery rather than “going downtown,” where greater, more demonstrative effects may be gained, even if it comes at the cost of more noncombatant and US military lives.

We have to remember why the EBO approach was developed in the first place: because many in the Department of Defense recognized that the classic campaign planning processes, including mission orders, commander’s intent, and commander’s intuition, were not resulting in successful operations. Why? Because the void between commander’s intent (and here General Mattis is right, a good commander’s intent is effects-based) and tactical objectives was not only too great, but one way . . . and ossified. In what capacity was it one way? The application of strategy to task evaluation produced campaign plans and objectives that were executed without continual review of tactical success versus strategic effects.¹¹ Effects-based operations were seen as a methodology that overcame this void. Going back to the “old way” of doing business is a spurious argument misrepresenting the reality of what the application of EBO has already achieved in campaign design, and the possibilities it holds for future conflicts.

Part of the problem is that joint planning concepts and processes have been “Balkanized” by disparate and competing (or at least arguing) contingencies. That is all well and good; a little arguing and discussion is a good thing. But these positions have gotten in the way of the effort to integrate concepts into a useful and intellectually rigorous understanding of operational design and operational art. As doctrine (both joint and Army) currently stipulates, the commander is tasked with directing operational design culminating with COA selection. The joint/service planning process leaves the resulting concept development to the staffs and components utilizing operational art. In reality op-

“The EBO characteristics that General Mattis refers to in the memorandum were a ‘strawman’ no longer reflecting any official (read Service) position.”

erational art is infused throughout operational design process (including the commander’s active involvement and guidance throughout the planning effort), with continuing analysis and understanding of the opponent’s intentions throughout the planning effort and into execution. Although this may represent the ideal planning process, it does not always happen. Sometimes even senior leaders get mired in a particular philosophy or way of thinking.

When Generals Casey, Abizaid, and Pace were asked by the White House in 2006 about the prospects for a “surge,” none believed it would work. Their core belief was that there were already too many soldiers on the ground in Baghdad and that to add more would only add to the number of deaths.¹² The commander’s intuition that General Mattis says we need to rely on resulted in a strategy based on killing as many insurgents as possible rather than providing security for the Iraqi people. If not for America’s civilian leadership pushing the military, then the Multi-National Force-Iraq (MNF-I) would either still be playing “whack-a-mole” or possibly even failing by now. All because there was no understanding of what the desired strategic effects in Iraq were or how to design a campaign that would permit the parties to plan backward in an effort to achieve them.

Effects-based operations are the key to attaining end-states in the Global War on Terrorism and other future conflicts. All students of military history recognize there is no immediate panacea for winning a war. But EBO never promised silver bullets. The EBO concept proposes that specific actions will result in specific effects, both positive and negative. The results in Iraq have been proven over the past five years. To ignore that both these positive and negative effects have been key to success in Desert Storm, Allied Force, Deliberate Force, Enduring Freedom, and Iraqi Freedom is to ignore the truth. Effects-based operations are not an Air Force or airpower doctrine. They take into account all elements of our national security apparatus in an effort to obtain operational and strategic objectives, which allows for freedom of action and encourages decentralized execution.

Instead of abandoning EBO because various forces and staffs have applied the concept inappropriately, USJFCOM, as the lead agent for US military transformation activities, should spearhead the effort to bring operations under a unified EBO construct. While joint force operations have touted the mantra of EBO since 2000, and despite numerous successful examples, some negative examples are “cherry picked” by those who parochially maintain a prejudice for large ground forces regardless of the context in which the battle is to be waged. The services and combatant commands, led by USJFCOM, need to actually apply the concept. This can best be accomplished by first determining the strategic and operational objectives they wish to achieve and then systematically analyzing the enemy in an effort to determine what elements should be attacked or neutralized and with what mix of forces. This will require two specific actions to be successful.

The first is to determine the desired effect in a coherent process from strategic to tactical. Planners need to determine what effects will lead to the attainment of operational objectives and the desired strategic end-state.¹³ The US Air Force cannot simply bomb airfields because “that is what we do” without regard as to how such action will achieve a specific objective. Nor can the US military merely roll ground forces over an objective without specifically understanding how such an action in that particular time and place will achieve a specific goal. Clausewitz exhorted that we must trace effects back to causes. “Win the fight” is not sufficient guidance.

The claim that EBO methodology is a tired concept that has been proven unsatisfactory in battle is simply not true. Perhaps the tried and true, battle-tested method General Mattis refers to is selection and defeat of enemy centers of gravity (COG). Yet from General Gordon Wells¹⁴ to Antulio Echevarria,¹⁵ some of the military’s best thinkers have written about how the concept of the center of gravity does not necessarily lead the joint force to terminal objectives. US operations in Iraq unfortunately upheld that reality. The August 2004 Campaign Plan listed multiple centers of gravity without providing any linkage as to how these COG would affect objectives and end-states.¹⁶

The EBO concept was developed to prevent misanalyzing and attacking centers of gravity that do not lead to the attainment of objectives. The US military cannot continue to analyze the enemy with the same shortsighted and unimaginative results when “popular support for the insurgency” or “the enemy population” are his centers of gravity. Such analysis and COG determination tell us nothing about what we should do militarily if we are to be victorious. “Doing Fallujah” or “doing Samarra” for the second, third, or fourth time; or every time opposition forces retake an objective is not efficient, nor is it effective. Yet prior to General David Petraeus’s new strategy, that is exactly what MNF-I was doing. In the absence of an effects-based approach,

Coalition forces were left to again play “whack-a-mole” in the same reactive nature, permitting the insurgent bands to assume the initiative rather than Coalition forces determining the desired effects and the measures required to attain them.¹⁷ The joint force commander and his staff are required to first determine the objectives or desired effects that are specific and quantifiable and lead to the attainment of the desired end-state.

The second activity that will ensure EBO success is assessing effects vice performance. Assessing effects is potentially the most difficult part of the process due to the fact that few services and their staffs are equipped or organized for that mission. A commander and his staff need to know what to assess and how to assess it. They then determine who makes the judgment call.

In determining what to assess and how to assess it, it is imperative that planners, commanders, and national leaders understand the difference between measuring performance and measuring effects. On a whole, we measure performance fairly well, as in the daily joint fires summary in Iraq that details what munitions were fired the previous day. The problem is that performance is not the same as effects. Performance tells the commander what you did, not how well you did it or if what you did leads to the accomplishment of specific objectives.

For example, since 2003 MNF-I has regularly reported the amount of reconstruction dollars spent, number of weapons turned in during the several buy-back programs, number of Kevlar helmets handed out to local police, and number of anti-Iraqi forces (AIF) killed. At one point in 2004, there were more AIF reported killed during a period of several months than there were reported to be in Iraq in total, and the insurgency was gaining in strength. Likewise, as the number of bodies increased in Baghdad morgues, Coalition forces continually underreported those deaths based on their own accepted methods of measuring performance, vice effects. It is clear that these measurements did little to tell senior leaders how far the reconstruction projects had moved toward completion, how secure the Iraqi populace actually was, or how effective the Iraqi police were.¹⁸ Although such events reflected desired effects, they are difficult to measure and link to any specific action. It would appear that we have forgotten that these effects need to be, as Clausewitz exhorted, carefully traced to objectives.

What America’s military decides to measure can determine if and when we declare accomplishment of the desired end-state. Joint forces need to carefully craft their measurement tools in such a manner as to not force them off their desired end-state. If protecting the force is the overall mission, as some NATO partners in Afghanistan postulate, then the best way to do that is by not going to where the threat is the greatest. In the same vein, a briefer at a recent Global Intelligence, Surveillance, and Reconnaissance

Conference stated the Army does not care about “efficiency” in tasking high-demand, low-density assets as long as each commander down to the lowest level knows what is around the corner. He was serious in positing that no tactical commander should be expected to risk his men to find out what was around the next corner. He argued that even given scarce resources, no soldier should risk the unknown, and therefore theater intelligence, surveillance, and reconnaissance assets should be committed to support tactical commanders. Where is the commander’s intuition in that?¹⁹ The reality of conflict, both today and in the future, is that the manning, equipping, and funding will not permit such myopic thinking. On the contrary, efficiency as well as effectiveness in tasking scarce resources need to be taken into account, a fact at the heart of EBO.

So why do we measure performance and not effects? First and most importantly, it is easy. Measuring effects takes effort to isolate said effects and link them to a given objective. Second, effects are not always easy to measure. If a staff is intent on bringing down the number of foreign fighters in a given area of operations, it is much easier to tell the leadership how many border posts were built. It is much more difficult to count and track the numbers of foreign fighters in the region from month to month. Such complex measures of effectiveness may require sound inferences to assess effects. For example, if there is a decrease in the number of unclaimed bodies at local morgues, the staff may be able to infer that there is a decrease in the number killed during the period. Third, performance fits in snugly with the history of intuition in battle. Unfortunately, the history of decisive battles leading to victory in war cannot be distinguished from the history of decisive battles having little or no effect on the outcome of the war.

Historian Russell Weigley wrote in *The Age of Battles* about the quest for the decisive battle which drove armies to the strategy of attrition warfare. While the quest for the decisive battle is often compared to the quest to strike the penultimate target in an effort to end a conflict, such a quest does not invalidate a strategy in which actions are tied to desired effects. Yes, enemies are complex and adaptive. Yes, there is chaos in war. Most planning processes take these factors into account. The fact that we have yet to consistently perfect an approach that may one day result in more effective operations does not mean that such an approach should be ignored or dismissed.

Not only is “the old way” of doing business what precipitated EBO, current conflicts have demonstrated areas (information warfare and counterinsurgency) where “the old way” fails to deliver under current demands. The elimination of EBO, SoSA, etc., would be a definitive step backward for America’s military and its move away from mass to technological and qualitative superiority. The conceptual construct of achieving effects effi-

ciently should not be used as a disguise to argue for more “boots on the ground.” Asserting that airpower operations have been “ineffective” until soldiers were on the ground belies the basic principles associated with joint warfighting.

The key is to not abandon the EBO concept. The key is to ensure that effects-based operations are properly planned and executed and that the effects are measured within the decision cycle of current operations.

NOTES

The author wishes to thank Jon Kimminau, Kevin Holzimmer, M. V. Smith, and Budd Jones for their invaluable ideas and conceptualizations of strategy, effects, and objectives.

1. “Assessment of Effects Based Operations,” Memorandum for US Joint Forces Command, from General J. N. Mattis, Commander, US Joint Forces Command, 14 August 2008.

2. Ibid.

3. Ibid.

4. See Department of the Army, Field Manual 5-0, *Army Planning and Orders Production* (Washington: Headquarters Department of the Army, January 2005), Chapter 3.

5. Ibid., 3-3. While the document lists seven steps in the MDMP, there are multiple inputs and outputs of every step.

6. See Air Force Doctrine Document 2, *Operations and Organization*, 3 April 2007, Chapter 2; see also Paul K. Davis, *Effects-Based Operations: A Grand Challenge for the Analytical Community* (Santa Monica, Calif.: RAND, 2001.)

7. See William Arkin, *Divining Victory: Airpower in the 2006 Israel-Hezbollah War* (Maxwell Air Force Base, Ala.: Air Univ. Press, 2007), 107. While the Israelis carefully selected their targets for law of armed conflict consideration, the cumulative effect was devastating and seemed excessive to all international observers. The fact that Israel achieved a negative effect does not invalidate EBO. It shows that the Israelis executed EBO poorly.

8. US Army Training and Doctrine Command, TRADOC Pamphlet 525-5-500, *The U.S. Army Commander's Appreciation and Campaign Design*, January 2008, Sections 1-3, 8-12.

9. Ibid., 10.

10. Ibid., 5.

11. See Edward C. Mann, Gary Endersby, and Thomas R. Searle, *Thinking Effects: Effects-Based Methodology for Joint Operations*, CADRE Paper #15 (Maxwell Air Force Base, Ala.: Air Univ. Press, 2002).

12. Bob Woodward, “Outmaneuvered and Outranked, Military Chiefs Became Outsiders,” *The Washington Post*, 8 September 2008, A1.

13. US Joint Forces Command, Joint Warfighting Center, *Commander's Handbook for an Effects-Based Approach to Joint Operations*, 24 February 2006, III-4.

14. Gordon M. Wells, “The Center of Gravity Fad: Consequence of the Absence of an Overarching American Theory of War,” Landpower Essay No. 01-1, Association of the United States Army, Institute of Land Warfare, March 2001.

15. Antulio J. Echevarria II, “Clausewitz's Center of Gravity: It's Not What We Thought,” *Naval War College Review*, 56 (Winter 2003).

16. The author served as Deputy Chief of Campaign Plans, Multi-National Force-Iraq, during the autumn of 2004 and co-authored General George Casey's campaign progress review. In one conversation with a senior Army officer discussing the lack of linkage between COG and end-states, the leader responded only with “That's the problem with you pointy-headed, ivory tower academic types. You know nothing about war.”

17. Bob Woodward, “Doubt, Distrust, Delay,” *The Washington Post*, 7 September 2008, A1. General Casey was handed his strategy of “clear, hold, build” which meant to clear a town of insurgents, hold it, and then rebuild it for the people. Instead, there was tremendous consternation on the staff about why US forces were ordered to go through a town to kill the insurgents and then retreat to their bases while the insurgents returned, necessitating a “whack-a-mole” strategy.

18. Tomislav Z. Ruby, “Campaign Planning Considerations,” in Thomas Mowle, ed., *Hope Is Not a Plan: The War in Iraq from Inside the Green Zone* (Westport, Conn.: Praeger Security International, 2007), 55-56.

19. Strategic Command/Joint Forces Component Commander-Intelligence, Surveillance, and Reconnaissance sponsored Global ISR Conference, Tysons Corner, Virginia, 29-31 July 2008.