

# Maligned and misunderstood<sup>1</sup>

**It's not the EBO concept that's wrong, but how it's been applied**

**BY JEFFREY B. HUKILL**

What happened to effects-based operations? Joint Forces Command chief Gen. James Mattis provided his perspective on the subject in an Aug. 14 guidance letter to JFCOM. He described a flawed, unrealistic, cumbersome and mechanistic process. This perspective surprised many EBO proponents because it describes a concept very different from its initial ideas. Originally, EBO principles did not inhibit battlefield initiative or require unrealistic perfect intelligence as described by Mattis. It appears that somewhere along the way, EBO concepts lost their direction. There is a disconnect between EBO's current application described by Mattis and the concept's original intent.

The goal of this article is not to debate Mattis' perspectives. Rather, the objective is to look at the difference between the current state of EBO, as described by Mattis, and the original effects-based concepts. Service and joint doctrine excerpts are investigated to identify the original EBO concepts. Doctrine is the best source to use because it accurately represents many original effects-based ideas and because of its authoritative nature. Finally, ways to help reset EBO thinking are examined.

## CONCEPT DIVERGENCE

The August EBO guidance raises a variety of concerns with current applications of EBO concepts. These concerns center around the ideas that EBO assumes a level of unachievable predictability, cannot correctly anticipate reactions of complex systems such as leadership, societies and political systems, discounts the human dimension of war, and supports leadership styles that stifle initiative and promote micromanagement. These conclusions represent critical issues that would negatively impact the planning and execution of any type of joint operation. However, to most advocates and many practitioners of EBO, these conclusions are the antithesis of what an effects-based approach is supposed to encompass.

Something happened to the original concepts. Either the concepts were converted into questionable processes that led to these conclusions, or the widespread misunderstanding of the original concepts resulted in their misapplication. After all, poor application does not necessarily make for a poor concept. In either case, the result is the same. To many, the perception or actual application of EBO concepts became too prescriptive and overengineered.

The original EBO concepts never advocated complete knowledge of the enemy; never claimed complete predictability of enemy reactions, whether in closed or complex systems; never discounted the human dimensions of war; never defined leadership styles; and never advocated anything that would lead to the micromanagement or the inability to deliver clear and timely direction to subordinates. Leadership issues are just that — leadership issues. Problems with



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micromanagement and unclear orders certainly predate EBO. This divergence in concept understanding must be addressed. The best way to tackle this problem is to reset current EBO thinking back to the concept's original intent.

## **DOCTRINE RESET**

So what are the fundamental EBO concepts that capture the true intent of the original ideas? It is important to understand these concepts in order to recognize the divergence between concept and the application problems discussed in the JFCOM commander's guidance. Once this difference is understood, it will be possible to make the necessary resetting of the joint force thinking on EBO. A lot has been written on the subject of EBO leading to various definitions and multiple interpretations. Rather than adding yet another personal interpretation of EBO, it's time to focus the discussion on the actual guidance for conducting joint, service and multinational activities across the range of military operations — doctrine.

Since doctrine should guide the military's understanding of best practices and principles, it ultimately is the most authoritative source. Service and joint doctrine are the best sources to frame the discussion of EBO fundamentals. Doctrine captures much of EBO's original intent and it provides a common language and common understanding of concepts. Rather than summarize what doctrine states, excerpts from several service and joint publications are used to highlight effects-based concepts. For ease of reading, the doctrine quotes are listed under a fundamental EBO concept description. The purpose is not to advocate one service's doctrine over another, but to allow for an unfiltered examination of effects-based concepts. Doctrine may not be everyone's favorite reading material, but please take the time to read all the excerpts. The best way to debate the issues surrounding the EBO concept is to know what the actual doctrinal guidance states.

## **EBO FUNDAMENTAL CONCEPTS**

1. Start operations with an understanding of the end state and linking actions to end-state accomplishment.

“EBO should focus on the objectives and the end state. All actions should be crafted so as to produce effects that attain the objectives and minimize unwanted effects that may hinder their attainment.” — Air Force Doctrine Document 2, “Operations and Organization.”

“Effects-based operations are about creating effects, not about platforms, weapons or methods. An effects-based approach starts with desired outcomes — the end state, objectives and subordinate desired effects — and then determines the resources needed to achieve them. It does not start with particular capabilities or resources and then decide what can be accomplished with them.” — AFDD 2.

“Thinking in terms of establishing conditions for success helps commanders and their staffs amplify the meaning of military strategic and operational objectives, understand the supporting desired and undesired effects, determine the best sequence of actions to create these effects, and develop more precise assessment measures. This effects-based approach remains within the framework of operational art and design helping commanders and their staffs clarify the relationship between tasks and objectives by describing the conditions that need to be established to achieve the military objectives and attain the end state. The JFC [joint force commander] and staff continue to develop and refine the necessary conditions for success (the desired effects) throughout the planning process. Monitoring progress toward attaining these effects, as part of the assessment process, begins during planning and continues throughout execution.” — Joint Publication 3-0, “Joint Operations.”

2. Integrate all instruments of power to accomplish the end state.

“Lines of effort typically focus on integrating the effects of military operations with those of other instruments of national power to support the broader effort.” — Field Manual 3-0, “Operations.”

“EBO cut across all dimensions, disciplines and levels of war. Cross-dimensional thinking involves integrating all the other instruments of power — diplomatic, informational and economic — with the military instrument in order to take a comprehensive approach to attaining the ultimate end state.” — AFDD 2.

3. Consider all military capabilities in strategy development.

“An effects-based approach is a comprehensive way of thinking about operations. It provides an overarching method of employing combat capability that is not directly tied to any specific strategy of war or type of operation.” — AFDD 2.

“Effects-based operations focus on behavior, not just physical changes. Traditional approaches to warfare made destruction of the enemy’s military forces the leading aim, usually accomplished through attrition — wearing the enemy down until losses exhaust him — or annihilation — his complete overthrow or conquest. These approaches accomplish objectives and can still be valuable parts of strategy, but an effects-based approach emphasizes that there are alternatives; that the ultimate aim in war is not to overthrow the enemy’s power, but to compel him to do our will.” — AFDD 2.

4. Establish the conditions for success by attempting to understand a system whose behavior you intend to affect.

“The JFC helps guide initial systems analysis by describing desired military strategic and operational objectives and desired/undesired effects as part of the commander’s planning guidance and intent. This guidance helps the staff focus their efforts on specific systems in the operational environment and identify potential tasks for the joint force components.” — JP 3-0.

“Systems’ thinking involves developing an understanding of the relationships within the insurgency and the environment, also the relationships of actions within the various lines of operations. This element is based on the perspective of the system sciences that seek to understand the interconnectedness, complexity and wholeness of the elements of systems in relation to one another.” — Field Manual 3-24/Marine Corps Warfighting Publication 3-33.5, “Counterinsurgency.”

5. Determine centers of gravity, decisive points and termination criteria to the best of one’s ability.

“The use of effects in planning can help commanders and staff determine the tasks required to achieve objectives and use other elements of operational design more effectively by clarifying the relationships between COGs, lines of operations, decisive points and termination criteria.” — JP 5-0, “Joint Operation Planning.”

6. Understand that war is a clash of complex adaptive systems, where the proximate cause of effects may be difficult to determine due to the enemy’s creativity and the fog and friction of conflict.

“Commanders and planners must appreciate that unpredictable third-party actions, unintended consequences of friendly operations, subordinate initiative and creativity, and the fog and friction of conflict will contribute to an uncertain operational environment.” — JP 5-0.

“The proximate cause of effects in interactively complex situations can be difficult to predict.” — JP 5-0.

“While desired tactical-level effects in combat operations typically relate to the military system, operational-level and strategic effects often pertain to other systems in the operational environment. Even direct effects in these systems can be more difficult to create, predict and measure, particularly when they relate to moral and cognitive issues (such as religion and the “mind of the adversary” respectively). Indirect effects in these systems often are difficult to foresee.” — JP 5-0.

“Where there is sufficient intelligence available to reliably predict the direct effects, some of the commander’s objectives can also be achieved indirectly. Some military objectives can be achieved by influencing political, economic, social and other systems in the operational environment. However, indirect effects often can be unintended and undesired if there are gaps in our understanding of the operational environment.” — JP 5-0.

“While predictive awareness can help anticipate many outcomes and help mitigate the impact of unintended negative effects, this can never be a perfect science in a world of complex systems.” — AFDD 2.

#### 7. Use mission type orders to accomplish missions or tasks.

“Regardless of the role of effects in joint planning and assessment, joint force commanders issue orders to service and functional component headquarters in the five-paragraph field order format. These orders assign tasks to subordinate units, detailing the effects to be achieved. For Army forces, this represents no change. Mission command and mission orders similarly focus on the effects to achieve rather than how to achieve them. Despite different terminology and processes, the use of effects in joint planning serves only to reinforce the essence of mission command: trust, initiative and flexibility.” — FM 3-0.

“Executing even relatively minor, planned actions produces second- and third-order effects throughout the force; these affect the operation’s overall synchronization. Nonetheless, under mission command, commanders accept some risk of desynchronization as the price of seizing, retaining and exploiting the initiative.” — FM 3-0.

“It also assigns missions or tasks according to mission-type orders, leaving decisions concerning the most appropriate mix of weapons and platforms to the lowest appropriate levels.” — AFDD 2.

#### 8. Integrate planning, execution and assessment in operations.

“The use of effects during planning is reflected in the steps of JOPP [Joint Operation Planning Process] — “as a way to clarify the relationship between objectives and tasks and help the JFC and staff determine conditions for achieving objectives. Commanders and staffs can use commander’s intent, a systems perspective of the operational environment, and an understanding of desired and undesired effects to coordinate and promote unified action with multinational and other agency partners.” — JP 5-0.

“Effects-based operations seek to integrate planning, execution and assessment.” — AFDD 2.

After reading this doctrinal discourse, it is clear that EBO concepts were never intended to produce the results described in Mattis’ guidance letter.

So what is the value of an effects-based approach? Or, put another way, what is new? An effects-based approach is one more piece to add to the evolution of the joint planning, execution and assessment puzzle. Simply, the goal of this concept is to encourage commanders and planners to think through a problem before committing to actions, to use a system approach to link the end state to actions, to consider the full range of capabilities available to achieve objectives in

support of an end state, and to understand if and how chosen actions are leading to the accomplishment of objectives.

The discussion of effects is an additional lens through which to view and understand the objectives. This lens allows commanders and their staffs to consider actions that are appropriate for each situation. It helps to open the aperture of thinking to leverage the full range of kinetic and nonkinetic resources available. An effects-based approach is not meant to change or rewrite the fundamentals of warfare, but rather to encourage commanders and their staffs to expand their understanding of these fundamentals and use them to achieve a desired end state. These ideas should stand out after reading the earlier doctrine excerpts. The challenge ahead is to rid the joint force of the misunderstandings and misapplications of the effects-based approach.

### **BRIDGING THE GAP**

There are several ways to bridge the gap between the doctrinal EBO concepts and its current application described in Mattis' EBO guidance. First and foremost, services must focus on service and joint doctrine when discussing an effects-based approach. The volumes of material written about an effects-based approach over the past 15 years have been vital to the formulation of the idea, but doctrine must be the source to guide the employment of the concept.

The problem with the development of the EBO concept over the past 15 years is that it has only recently been explained well in doctrine. Since the early 1990s, many who found value in effects-based concepts advocated their own interpretation of these ideas. This led to multiple definitions and multiple understandings of what EBO was or was not. Teaching effects-based concepts to a variety of service and joint audiences was always a challenge because there was no agreement on definitions of terms, let alone the concept's details. With no consensus, organizations came up with their own interpretations of how to implement the concepts. These varied approaches led to much of the confusion and misunderstanding. The unfortunate outcome was that these various interpretations diminished EBO's influence and impact.

It was not until 2004 in Air Force doctrine and 2006 in joint doctrine that effects-based concepts were better explained. While no doctrine is perfect, it is the source that should guide the debate. The continued evolution of effects-based concepts with joint processes in doctrine should continue. The real problems however, are the misconceptions and "EBO urban legends" that are already entrenched in the thinking of different services.

The basis of the problem centers on two of the EBO urban legends, namely, the requirement for total understanding of an enemy and the guaranteed predictability of outcomes. These ideas really took hold from the beginning of JFCOM's involvement with EBO. JFCOM bundled certain concepts with the effects-based approach that are not part of the original model. These concepts included, first and most significantly, operational net assessment (ONA), which promised near-perfect, "predictive" battlespace awareness. Second was system-of-systems analysis (SoSA), a simplified version of the complex adaptive systems theory used throughout the world in many "soft-science" applications such as economic market analysis. SoSA also promised "predictive" outcomes as it sought to reduce warfare between living, adapting (and unpredictable) systems to easily understood elements and formulae. SoSA failed to make a distinction between structural complexity and interactive complexity of the systems it was attempting to model.

The Air Force objected strenuously to the inclusion of ONA and elements of SoSA with EBO, but it did so largely in the secluded venues of doctrine development and academia. Service objections to what JFCOM "sold" during the last four years did produce some disclaimers in

their three published predoctrinal works on EBO titled: “Commander’s Handbook for an Effects-based Approach to Joint Operations” and its supplements, Supplement One (Theory) and Supplement Two (Operational Net Assessment). These disclaimers moderated the more extreme claims JFCOM’s EBO advocates promised, but these did not produce joint consensus, and JFCOM’s written material did not progress beyond predoctrinal handbooks and working papers. Significantly, JFCOM continued to bundle ONA and SoSA with EBO in its series of handbooks and pamphlets and “sell” its version of EBO to combatant commands in the field. A systems understanding of an enemy and accurate assessment are linchpin concepts to an effects-based approach to operations. An approach to ONA and SoSA that eliminates the **actual or perceived** requirements for total knowledge of an adversary or guaranteed predictability of outcomes are useful frameworks for continued effects-based concept development.

Second, once the effects-based approach debate is reset to doctrine-based ideas, the next step is to incorporate these ideas into a common education and training framework. The goal should be common training and education within and between services. Whether you are sitting in an Army, Navy or Air Force training course, or attending one of the services’ colleges, the material you get on an effects-based approach should be almost identical. A rigid framework without deviations between courses is not practical or advisable. However, deviations should only occur where appropriate for service- or mission-unique circumstances rather than lack of doctrinal guidance.

Third, the parochial arguments are divisive and need to stop. Many arguments for and against an effects-based approach are steeped in service parochial agendas, all of which are hurting effective joint operations and risking mission success. While it is legitimate to debate the proper mix of forces needed to achieve objectives, it is not proper to use an effects-based approach as an excuse for an over-reliance on any particular type of force structure. This should be readily apparent after reading the earlier doctrine excerpts. There is nothing in joint or service doctrine dealing with an effects-based approach that would emphasize air over ground maneuver forces. As doctrine says, an effects-based approach is strategy-neutral.

All the services need to put their parochial arguments aside. The best approach is to assimilate the top concepts of all the constructs, then place them in service and joint doctrine.

Finally, it would be helpful if JFCOM clarified its intent with the guidance letter. The letter has provoked a lot of discussion throughout all the services. There is ammunition in the guidance for opponents and proponents alike. Opponents of the effects-based approach are using the letter as evidence that the concept is dangerous and should be eliminated. Proponents feel that the guidance is not only *misguided* but parochial and inconsistent with a joint view of military operations. Others see it as a chance, once and for all, to kill misunderstandings about the concept that have developed over the years, so that effects-based thinking can continue to evolve and be effectively integrated into overall joint processes. Different sections of the guidance support each of these positions causing confusion. Was the goal to encourage the services and joint community to rid these processes of all effects-based thinking, or was it to just rid the processes of the misconceptions that led to the “EBO urban legends?” Clarification would help as services and the joint force continue to evolve all these concepts.

Effects-based concepts deserve further serious consideration within the military intellectual community, joint and combined experimenters, tool-builders, and war fighters in the field. The joint force should not abandon effects-based concepts simply because processes have warped the concept’s original intent or because the concept has been misapplied. Hopefully, this was the goal of Mattis’ EBO guidance when it states that JFCOM would no longer use, sponsor or export

the terms and concepts related to EBO, ONA and SoSA. By no longer sponsoring distorted EBO concepts JFCOM will help end the misunderstandings and misperceptions of EBO's original intent, improving its application. If the JFCOM commander's guidance helps to reset EBO thinking, it will be a significant step forward in the continued evolution of effects-based thinking.  
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