

**T**en years ago, Effects-Based Operations was a driving concept in US military strategy. It was a departure from the traditional American way of war which, since the days of Ulysses S. Grant, had centered on annihilation and attrition.

According to EBO, the purpose of a military operation is to achieve a desired strategic, operational, or tactical effect—such as neutralizing the enemy or holding him in check—but does not in every instance require the destruction of the enemy force, especially at the expense of high casualties.

EBO originated in the Air Force in the 1990s, gradually gained joint and international recognition, and was a constant topic for war colleges and professional military journals. Then, in the fall of 2008, EBO hit a barrier.

# The Assault on EBO

By John T. Correll

**The cardinal sin of Effects-Based Operations was that it threatened the traditional way of war.**



AP photo by Sergei Grits

Both the term and the concept were summarily purged by order of Marine Corps Gen. James N. Mattis, commander of US Joint Forces Command. In a sweeping declaration Aug. 14, 2008, Mattis said that JFCOM would no longer “use, sponsor, or export” EBO or related concepts and terms, the underlying principles of which he deemed to be “fundamentally flawed.” Coming as it did from JFCOM, the judgment carried weight in the joint world.

Mattis’ reason, ostensibly, was that the methodology—a combination of EBO and computer-modeling software, operational net assessment (ONA), and system-of-system analysis (SoSA)—had “not delivered on their advertised benefits” and did a poor job of predicting the outcome of battle. What Mattis did not say was that ONA and SoSA were

not part of the Air Force concept. They had been grafted onto EBO by Joint Forces Command itself despite Air Force objection.

No doubt the methodology was part of it, but it wasn’t nearly all of it.

EBO had been guilty of a cardinal sin. Traditionalists took it as a threat to the budgets and dominance of the ground forces. The JFCOM decision capped a long-running effort to dump EBO by ground power advocates alarmed by the rise of airpower in joint operations. Mattis himself was on record against EBO before he came to JFCOM.

Retired Marine Corps Lt. Gen. Paul K. Van Riper—who had led the opposition to EBO since the 1990s—praised Mattis for putting an end to EBO and said that “with the Effects-Based Operations distraction now behind them,”

US military leaders could “once again effectively employ the simple elegance of mission-oriented command.”

### Not Quite Dead

However, EBO was not quite as dead as Mattis and Van Riper figured. It never went away completely and, with the passage of time, the embattled concept is stirring again. For the first time in more than five years, the Air Force is speaking up in public on the subject. The forthcoming Air Force Doctrine Document 3-0 takes a strong position in favor of “the effects-based approach to operations.”

“The Air Force very much supports an effects-based approach as a way of thinking about, planning, and executing operations,” said Maj. Gen. Thomas K. Andersen, commander of USAF’s Curtis



Photo courtesy of David Deptula

**Far left: Northern Alliance fighters study contrails from US jets above the village of Ai-Khanum, Afghanistan, in 2001. Many primary objectives in Afghanistan were achieved in the early months of Operation Enduring Freedom, when EBO tactics were being employed. Left: Then-Lt. Col. David Deptula (r) briefs Gen. Norman Schwarzkopf, head of US Central Command, just hours before the air campaign that began Operation Desert Storm in 1991.**

E. LeMay Center for Doctrine Development and Education. “We still hold that operations are driven by desired ends. It makes the most efficient use of resources and best integrates us into the joint effort.

Retired Air Force Lt. Gen. David A. Deptula, the developer and primary champion of EBO, says that the effects-based approach continues in de facto usage by US and NATO military planners. “EBO is alive and well,” Deptula said. “It simply makes too much common sense not to apply, and contrary to the way it has been cast by detractors, it is very much a joint approach.”

EBO was based in considerable part on the experience of the Gulf War in 1991 in which Deptula, then a lieutenant colonel, was the principal planner for attack operations in the coalition air campaign.

Deptula built on the work of Col. John A. Warden III, airpower theorist and head of the Checkmate planning cell in the Pentagon where Deptula had been pulled in as an extra hand at the outset of the crisis in the Gulf. Warden held that the enemy should be regarded as a system, held together by vital strategic “centers of gravity,” which should be given priority in the attack.



**USMC Gen. James Mattis addresses Naval War College students in Newport, R.I., in 2012. In 2008, as head of Joint Forces Command, Mattis wasted no time in gutting EBO. He had been on record as being a foe of the concept before his appointment.**

“Warden’s group generated a series of then-innovative concepts, and we many times discussed an ‘effects-based’ approach to warfare,” Deptula said. When the Gulf War started, Warden remained in Washington, but Deptula was assigned to the “Black Hole,” the below-ground planning shop of the air component in Riyadh, Saudi Arabia.

“I used an effects-based approach in building the actual Desert Storm air campaign targeting plan,” Deptula said. “On my initial attack plan, I had a column labeled ‘effects.’”

The campaign as executed threw out the off-the-shelf plan, which called for airpower to concentrate on the enemy force at the front, trading space for time and holding back the invaders until ground forces got there to regain the initiative.

It was the first conflict to effectively use “parallel operations,” in which all target sets were attacked concurrently and from the beginning, making it impossible for the enemy to adjust or adapt. About 150 individual target sets were struck the first day—more than were struck over central Europe during World War II in the years 1942 and 1943 combined. By morning of the first day, Iraq’s command and control network no longer existed, and Saddam Hussein’s ability to mount a coherent military response was gone.

“The solution lay in effects-based rather than destruction-based targeting,” Deptula said. The goal was to render enemy forces ineffective and unable to conduct operations. Iraqi aircraft fled to Iran and Iraqi soldiers abandoned their tanks. Power plants shut down to avoid

being bombed. In 38 days, airpower reduced the opposition to the extent that the reeling Iraqi army was polished off by a four-day ground offensive. US and coalition casualties were a small fraction of the high numbers predicted before the operation began.

Such a strategy had been imagined by early airpower theorists but the requisite technology, particularly in the levels of precision attack, stealth, and information superiority, had not existed in previous conflicts.

### **New Way of War**

After the Gulf War, Deptula continued to expound on the EBO concept. “If we focus on effects—the end of strategy rather than force on force—that enables us to consider different and perhaps more effective ways to accomplish the same goal more quickly than in the past, with fewer resources, and most importantly with fewer casualties,” Deptula said.

EBO emphasized parallel operations as a departure from the traditional practice in which many high-value targets were not struck until the enemy forces were rolled back and sorties were applied against individual targets in a sequential process often referred to as “servicing a target list.”

Although EBO applied to all services, it meant that airpower would take on more of the burden and would most likely be the dominant means of conducting parallel warfare in a major regional conflict.

In 1996, Air Force Chief of Staff Gen. Ronald R. Fogleman said, “We are on the verge of introducing a new American

way of war,” an alternative to the strategy of annihilation and attrition that had prevailed since the 1800s. There was an opportunity and an obligation, he said, to move away from the costly clash of force on force “to a concept that leverages our sophisticated military capabilities to achieve US objectives.”

As the evidence from regional conflicts of the 1990s mounted, the basic ideas of EBO gained acceptance. A Joint Vision statement by the Joint Chiefs of Staff in 1996 and the Quadrennial Defense Review in 1997 said that a “revolution in military affairs” had taken place. The Joint Chiefs acknowledged the capability to achieve the effects of mass without the actual massing of forces.

Defenders of the traditional approach were quick to strike back. In 1998, Van Riper—former commanding general of the Marine Corps Combat Development Command—ridiculed the revolution in military affairs as “lacking meaningful substance” and condemned the “unfulfilled promises” of airpower “from Douhet to Deptula.”

Van Riper said that most of those espousing “the current nonsense” did not understand “the confusion and horror of the close-in fighting that occurs in real war” and had gotten their field experience “in vessels sailing hundreds of feet below the surface of the ocean, in aircraft flying miles above the battlefield, or in the command facilities of major headquarters.”

The traditionalists were partially successful in their rollback efforts. A revised Joint Vision statement in 2000 restored the traditional concept of mass and eliminated recognition of the revolution in military affairs. On balance, though, EBO was still moving forward.

US Joint Forces Command was redesignated in 1999 with a charter to lead the “transformation” to capabilities for the future. (“Transformation” was another term on Van Riper’s list of “empty buzz words.”) The Joint Chiefs delegated to JFCOM a primary role in the development of concepts and joint doctrine, and JFCOM began an enthusiastic pursuit of EBO.

### **The Attack on EBO**

The attacks on EBO kept coming. Conrad Crane, professor of military strategy at the Army War College, said that EBO was “based on overconfidence in the potential of technology” and a “misguided belief in the myth that the American public will not tolerate friendly casualties.” The United States was most



successful in war “when it concludes with a triumphant march through the enemy capital,” Crane said.

Col. Gary H. Cheek—later a major general and deputy commander of Third Army—asked whether EBO meant “the end of dominant maneuver” and said, “To many senior leaders in the US Army, the concept of Effects-Based Operations is another attempt by strategic bombing advocates to line Air Force coffers at the expense of land forces.”

Army Field Manual 3-0 in 2001 stated, “Ultimately, the outcome of battles, major operations, and campaigns depends on the ability of Army forces to close with and destroy the enemy.” Army Training and Doctrine Command said that EBO had no place in Army doctrine.

“EBO isn’t a strategy—it’s a sales pitch,” said Ralph Peters, a retired Army intelligence officer turned opinion columnist. “The only Effects-Based Operations that mean anything are those that destroy the enemy’s military, the opposing leadership, and the population’s collective will. Bombing well-selected targets helps. But only killing wins wars.”

Most dogged of all in the attack was Van Riper. In an e-mail message to Marine Corps and Army leaders in 2005, Van Riper said the joint force development process was producing concepts “devoid

of meaningful content” and undermining “a coherent body of doctrine.” Of the “vacuous slogans” imposed on the armed forces, none were “more egregious than the idea of ‘Effects-Based Operations,’” he said. Van Riper said he had intended the message as a “private communication,” but copies spread like wildfire and were soon reported in the trade press.

One of the first military officers to respond to the Van Riper e-mail chain was Mattis, then commander of the Marine Corps Combat Development Command. “We have been engaged on this issue for many months now, highlighting the flaws in the effects-based approach that is permeating all aspects of joint warfighting doctrine,” he said. “There is nothing in General Van Riper’s statement with which I disagree. ... I think he is squarely on target.”

Meanwhile, EBO was undergoing a strange metamorphosis at JFCOM, where the computerized techniques of operational net assessment and system-of-system analysis had been added to “give greater precision and rigor to the formulation and coordination of unified action before, during, and after an operation.”

“A ground-centric JFCOM staff attempted to turn EBO into tactics, techniques, and procedures,” Deptula said.

***Demolished vehicles line Highway 80, the infamous “Highway of Death” used by Iraqi forces fleeing Kuwait during Desert Storm. Deptula’s EBO approach to air campaigns proved particularly effective during the operation.***

“They built a checklist for the conduct of EBO. It was a technical, activity-based list of dozens of steps to achieve a certified Effects-Based Operation. I did not agree with what JFCOM had done, as it ran counter to the essence of the effects-based approach. It had become too prescriptive and over-engineered by JFCOM.”

### **Mattis Drops His Bomb**

Mattis took command of JFCOM in November 2007. His purge of EBO came the following August in a two-page memorandum with five pages of “Commander’s Guidance” attached. It was addressed to JFCOM with copies to commands and agencies of all services.

“We must return to time honored principles and terminology that our forces have tested in the crucible of battle and are well-grounded in the theory and nature of war,” Mattis said. He ticked off a list of failures of EBO, as seen by the Army, the Marine Corps, and “other observers.” EBO, he said, among other faults, “Assumes a level of unachievable

predictability. ... Calls for an unattainable level of knowledge of the enemy. ... Is too prescriptive and over engineered. ... Discounts the human dimension of war. ... Promotes centralization and leads to micromanagement from HQs. ... Is staff, not command, led."

Mattis said, "War is not composed of the tactics of targetry or an algebraic approach to measuring effects resulting from our actions, but rather operations guided by commander's intent and constant feedback loops."

Belief that the enemy could be immobilized by precision air attacks against critical military systems with little or no use of land forces "runs contrary to historical lessons and the fundamental nature of war," Mattis said.

In his memo and guidance, Mattis made no effort whatsoever to separate the add-on JFCOM methodology from the basic Air Force concept.

As Air Force colonels P. Mason Carpenter and William F. Andrews said later in *Joint Force Quarterly*, JFCOM "rendered a valuable joint concept unusable by promising unattainable predictability and by linking it to the highly deterministic computer-based modeling of ONA and SoSA." In so doing, JFCOM "prescribed the consumption of a fatal poison." It "weighed down a useful concept with an unworkable software approach to war."

Even Van Riper saw the difference. He acknowledged that Deptula and Warden were right when they "demanded that targeting officers expand their horizons and determine how best to attack systems rather than targets" and that it was the JFCOM variant of EBO that "most damaged operational thinking." At the same time, he applauded Mattis for throwing out the "vacuous concept" of EBO.

Carpenter and Andrews said, "American airmen might be excused for contemplating whether the [Mattis] edict is indirectly aimed at excluding the strategic use of airpower in order to drive an exclusive focus on 'the three-block war' as the only future American way of war."

Deptula said that EBO "was not simply a concept. It was a proven approach that was the basis of the Desert Storm air campaign that was a turning point in the conduct of modern warfare. What Mattis did was reminiscent of book burning to stem the spread of ideas."

### From EBO to LOBOG

Mattis' authority did not extend as far as directing joint doctrine but the Joint Staff gave him tacit support in a tightly worded statement saying that



**USMC Marine Lt. Gen. Paul Van Riper became a vociferous critic of EBO.**

the bulk of the EBO "construct" had never been incorporated into joint doctrine anyway.

There was no objection or public response from the Air Force, which was still reeling from the decapitation in July 2008 when Secretary of Defense Robert M. Gates fired the Air Force Secretary and Chief of Staff for reasons widely believed to be related in part to their strong advocacy of airpower.

Mattis stuck to his convictions in ensuring public appearances, calling EBO a "bastardization" of what the Air Force does and dismissing "concepts that are defined in three letters." In August 2010, Mattis was named commander of US Central Command, where his antipathy to EBO continued. JFCOM was abolished in 2011 but there was no change in the joint position on EBO.

Deptula retired in October 2010 and is now free to speak more openly about the curtailment of EBO and the consequences. "We are entering our 12th year of operations in Afghanistan using General Mattis' alternative to EBO, which has been LOBOG, or 'Lots of Boots on the Ground,'" Deptula said.

Deptula hastens to add that "boots on the ground may be an element in an effects-based solution." That in fact was the case in the first three months of Operation Enduring Freedom in Afghanistan when ground and air forces worked together to oust the Taliban, install a government friendly to the US, and eliminate the al Qaeda terrorist training camps. "We achieved those critical

US security interests by early 2002," Deptula said.

In an article in *AOL Defense* in October, Deptula said that more recent operations in Afghanistan had stopped using an effects-based approach to determine desired outcomes on the basis of critical US interests and that "mission creep" had led to "committing resources to what had then become contingencies of choice rather than of necessity."

### Resurgence

The new Air Force Doctrine Document 3-0, Operations and Planning, will concentrate EBO, previously scattered through various doctrine documents, in a central location. It makes an obvious effort to use joint-friendly language, but the position it takes is essentially the same as the old Air Force version without the add-on software metrics.

AFDD 3-0 uses "Effects-Based Approach to Operations," the term now generally favored and which establishes better alignment with previous joint and international usage. It describes EBAO above all as "a way of thinking" that does not mandate any particular strategy. AFDD 3-0 even recognizes annihilation and attrition as possible alternatives, but emphasizes that "the ultimate aim in war is not just to overthrow the enemy's military power but to compel them to do one's will."

Deptula says that "an effects-based approach to operations has permeated the international as well as domestic arenas." The issue of effects arose repeatedly over the past two years at the NATO Joint Airpower Competence Center conferences in Germany, where the approach was embraced by ground commanders as well as airmen, Deptula said.

"The goal of war is to cause our adversaries to act according to our strategic interests," Deptula says. "The challenge lies in institutionalizing the effects-based methodology. To a degree, that is happening today with the realization that the counterinsurgency approaches in Iraq and Afghanistan were so sub-optimal in attaining critical coalition security objectives.

"Our capabilities can yield much more than destruction. They can influence behavior," Deptula continued. "In the end, that's what warfare is all about. We can no longer blast or buy our way through wicked problem sets. We must think our way through them." ■

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