

Viewpoints

EBO – Fit for Purpose?

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Introduction

The effects-based operations (EBO)¹ concept has been extant for over 20 years yet remains controversial despite extensive use and considerable debate. This short paper aims to outline the main issues raised and to offer an opinion of its actual utility particularly in air power terms. One view is that EBO is an overly academic scheme which is impracticable in the real world. Another is that it is an effective, though intellectually demanding, method but one which has been often misunderstood and misused. In short, has EBO been tried and found wanting or tried and found difficult?

Some of the assessments and censure have been very harsh. For its 2006 campaign in southern Lebanon, the Israeli Defence Force (IDF) used its EBO variant, Systemic Operational Design (SOD). That doctrine and its application were severely criticised in the subsequent government inquiry.² The IDF undoubtedly had far greater combat power than its adversary and the Israeli Air Force (IAF) could hit targets with near impunity. However, the operational design was described as “incomprehensible” and it failed to achieve decisive results. SOD was judged to be inflexible and process-centric with the assessment of the Hezbollah adversary failing to take into account the human element of conflict. The result, the inquiry concluded, was an ineffective use of force leading to strategic failure. In summary, the critics claimed that SOD was unrealistic and so complex in practice as to be unfit for purpose.

In 2008, General James Mattis, the then Commander of US Joint Forces Command (USJFCOM), published an outspoken critique of EBO.³ A series of negative assessments led to his unequivocal directive:

"Effective immediately, USJFCOM will no longer use, sponsor or export the terms and concepts related to EBO...in our training, doctrine development and support of JPME (Joint Professional Military Education)."

General Mattis also attributed Israel's 2006 failure to "over-reliance on EBO concepts" and referred to EBO achieving "...mediocre results in exercises, experiments and current operations".

A prompt defence stated that EBO was combat proven and had been the basis for success in the Operation Desert Storm air campaign (Kuwait, 1991) and in Operation Allied Force (Kosovo 1999).⁴ It is notable that the defenders were serving USAF officers. EBO originated in the Air domain and many advocates have been airmen; the Land domain has generally been less enthusiastic. Given the intellectual investment in EBO, it would be wrong to discard it without careful consideration but given the criticisms, thorough review is essential with revision or rejection as appropriate.

The core of the concept is simple and is, I believe, an entirely valid approach to operations. First, the aim is achieving the required end state efficiently and effectively; ie it is far more than organising military activity. Second, the effects of actions must be considered pan domain and long term. Third, thorough analysis of actions is essential so as to support campaign progress assessment. From the third point, task completion does not guarantee achievement of purpose; understanding the causal links between actions and outcomes is vital.

Unfortunately, while the concept is simple its application is not. Determining the aims and the effects required, identifying the best means of achieving them and then assessing the results actually achieved are all very demanding. (Dealing with the pan domain and long term effects issue can be particularly difficult). EBO was oversold by some of its advocates who promised too much and then under delivered. It was implied (or even claimed) that a highly detailed model of the adversary and scenario would readily identify courses of action and offer reliably predictable outcomes. In practice, no model could adequately represent such complex matters nor was the required data readily available if at all. The only guaranteed prediction was the eventual disillusionment of the 'customers'. They were understandably not impressed by claims that all would be well if only more data could be collected and a more complex model built. As a result, many rejected the concept and returned to their previous practices. Unfortunately, this has included the bad habit of using a capability because it is available rather than because it is appropriate. (There is some truth in the Land/Maritime joke that Air cannot see a bridge without wanting to drop it).

Others have paid lip service to EBO and misapplied its terms. In particular, 'effect' has become synonymous with 'activity'. This is absolutely not the case. They are related but distinct; an effect is the result of an activity. The phrase '*delivering effects*' is now common and it has definite negative effects itself. It implies that the selected activity is guaranteed to achieve the intended effect. Even when an activity is performed well, the intended effect may not occur,

eg the target may have been mis-selected. Furthermore, this view reinforces the tendency to under-resource assessment (why bother if the outcome is certain?). Yet, the basis of EBO is continual assessment so as to gain *and* maintain thorough understanding of the scenario, of the results achieved (good and bad) and, ultimately, of campaign progress. Unfortunately, even the immediate, local effects of actions are often inadequately understood let alone the wider system and longer term outcomes.

Properly applied, EBO can be both very effective and very efficient; though to achieve this, both the aim and the target must be well understood. In Operation Desert Storm, the initial plan to suppress the Iraqi air defences involved attacking each sector operations centre (SOC) with six 2,000-lb LGB. It was then realised that complete destruction was not essential, the requirement was to degrade effectiveness. Instead, each SOC was struck with a single 2,000-lb bomb aiming to damage the facilities and discourage the survivors. In the event, the Iraqi IADS collapsed within 4 hours and never functioned effectively again. The required effect was achieved at greatly reduced cost so freeing scarce assets for other missions.

The claim that Kosovo was an EBO success is only partly correct. Air power was eventually applied effectively though it was not the sole factor in forcing Milosevic to concede. The campaign began with a serious error, specifically failing to understand the importance of the province of Kosovo to Serbian national identity. It was assumed that a 'short, sharp' coercive lesson would be enough to end the ethnic cleansing and force Serbian forces to withdraw. The air campaign eventually lasted 78 days and generated considerable criticism as to the means and doubt as to its effectiveness. (Air attack effectiveness against Serbian fielded forces was greatly over-estimated). It was not until D+33 that attacks were made against the 'four pillars' of Milosevic's power: the political centre, the media, the security forces and the economic system. Extensive damage to the economic infrastructure plus water and power shortages provoked civil unrest. The eventual targeting of assets belonging to key regime members led to significant pressure on Milosevic to capitulate. Though Kosovo was far from a perfect campaign, it is a good 'bad' example of EBO in emphasising the importance of understanding your adversary, selecting the right targets and conducting accurate assessment.

A poorly devised and directed air campaign can be both very costly and ineffective. Operation Rolling Thunder directed massive attack effort (844,000 tons of munitions) against North Vietnam. Intended to coerce the North's leadership to cease supporting the Viet Cong insurgency in South Vietnam, it failed completely. Envisaged as lasting weeks or months, it ran for 3½ years (March 65 to November 68) with the loss of over 900 aircraft. By contrast, Operation Linebacker II lasted only 11 days and met with success. It inflicted such severe damage on North Vietnam's economy that it forced their leadership to return to the 1972 Paris peace talks and to sign a cease fire agreement. In Rolling Thunder, the Americans misjudged the North's determination to reunify the country and hence their readiness to absorb the punishment of an air bombardment that laboured under political limitations. In Linebacker II, air power was directed against particularly high value targets whose collective loss was

unacceptable to the North. The better understanding of the adversary's values was key to Linebacker II's success. (It is reasonable to analyse pre-EBO era conflicts such as the Vietnam War from an effects perspective. Technology changes, the principles of war do not).

Devising and executing an air tasking order is a major challenge requiring expert knowledge and much effort. It is the means by which air power is applied but the tactical and organisational skill must be complemented by campaign level understanding. Unfortunately, the emphasis is often far more on action and ISR collection than on analysis. Terabytes of data do not guarantee success. Situational awareness is vital but situational *understanding* is even more important. That requires assessment by people who understand both the scenario and the utility of air power at the campaign level. Yet, we are often still drowning in data while starving for knowledge. As one authority has observed:

"Sifting the data into what is important and time-critical becomes a genuine challenge, since concentrating on the wrong thing could lead to mission failure. The drive to streamline procedures and handle ever more data has had an important side-effect: airmen have become driven by process not strategy".⁵

EBO has been misused and, unsurprisingly, failed. But it has also worked and can work again if it is applied correctly and if the focus is that of achieving strategic aims with process as the supporting effort. A poorly executed attempt at the manoeuvrist approach does not invalidate that concept. Equally, an inept use of EBO should prompt criticism of the user not the method. The EBO evangelists oversold the concept and inevitably people were disillusioned. EBO is not simple; it is very demanding as it requires considerable intellectual investment and application. To be blunt, the intellectual challenge is off-putting to some people. However, a campaign is far more than the organising of tactical activities. Our undoubted tactical expertise must be complemented by campaign level capability.

One of general Mattis's criticisms was that *"EBO discounts the human dimensions of war (e.g. passion, imagination, willpower and unpredictability)"*. Applied sensibly, EBO takes account of the human dimension. There is a temptation to focus on tangible systems such as power grids which offer greater predictability than people and societies. Many military people and most analysts prefer the relative certainty of the quantitative domain such as weapon ballistics. We must complement this with a qualitative approach to campaign planning and assessment. It does not mean a New Age 'touchy feely' style but the development of a knowledge-based intuitive filter to see through the fog of war to recognise the truly important detail.

EBO has utility if it is properly understood and sensibly applied. That application must begin with the determining of the aims and only then should the means be considered. Of course, we must make war as we have to rather than as we would wish to, but we must stop taking actions simply because we have the means. Owning a hammer does not mean treating every problem as a nail. We must stop using the term '*delivering effects*'. It has a toxic effect

on people's understanding of the concept. It implies that achieving an effect depends solely on completing a particular task, so making assessment an option rather than the necessity it is – and one deserving greater resource than it often gets. Education is key. We must expand education beyond expertise in technology and tactics. We must understand the utility of air power at the operational and strategic levels. It means a solid foundation of knowledge of air power history, of when it worked and why it worked and when it failed and why it failed.

Notes

¹ In UK military doctrine, EBO is expressed as the effects-based approach (EBA) to operations, an element of the pan domain Comprehensive Approach. As much of the comment and criticism originates from the USA, the term EBO will be used in this paper for consistency.

² Matthews, M. M. 'We Were Caught Unprepared: The 2006 Hezbollah-Israeli War'. The Long War Series Occasional Paper 26. Fort Leavenworth, Kansas. Combat Studies Institute Press. 2008.

³ Mattis, James N. "USJFCOM Commander's Guidance for Effects-based Operations". *Parameters*, Vol. XXXVIII, Autumn 2008. pp. 18-25. <http://www.carlisle.army.mil/usawc/Parameters/Articles/08autumn/mattis.pdf>

⁴ Carpenter, P. M and Andrews W. F. 'Effects-based Operations: Combat Proven' Joint Force Quarterly Issue 52 (1st Quarter 2009).

⁵ Peach, S. 'The Airmen's Dilemma: To Command or Control?' Chap 6. pp123-4. Air Power 21. Challenges for the New Century. Edited by Peter W Gray. The Stationery Office. 2000.

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