

**United States Military Academy
West Point, New York 10996**

Applying Value-Focused Thinking to Effects Based Operations

**OPERATIONS RESEARCH CENTER OF EXCELLENCE
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Abstract

There is a clear relationship between Effects Based Operations (EBO) and Value-Focused Thinking (VFT). This briefing attempts to highlight the ways in which commanders at all levels can use VFT to improve their results with EBO. It shows how the nine benefits given in Ralph Keeney's "Value-Focused Thinking" align with commanders performing missions across the entire spectrum of military operations. These commanders must consider not only the primary or first order effects of their decisions, but also the secondary and higher order effects to include, social, political, economical, and moral ramifications. By executing all decisions based on ends objectives that collectively represent the commander's values, that commander will greatly increase his likelihood of a successful long-term outcome given that he has honestly identified his values.

This briefing was presented 23 June 2005 at the 73rd MORS Symposium to Working Group 28 (Decision Analysis).

Slide 1

Effects Based Operations

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This presentation is based on a suggestion from Dr. Greg Parnell, Professor of Systems Engineering, USMA. It was presented at the 73rd MORSS that took place at West Point, NY in June of 2005.

Agenda

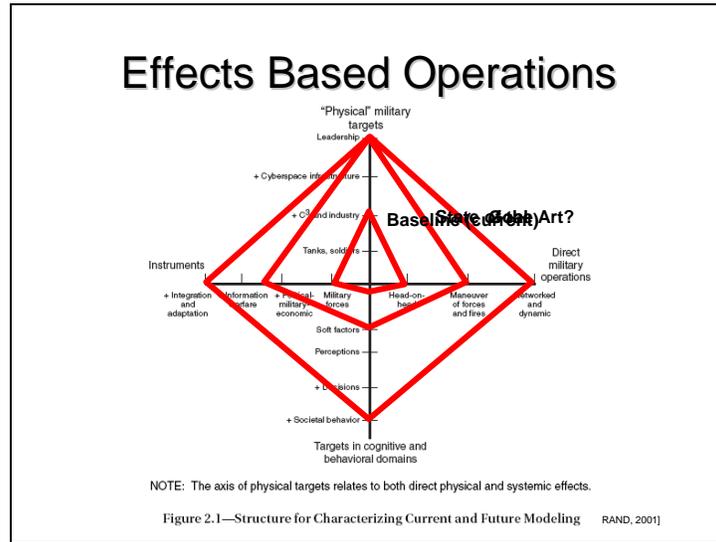
- Effects Based Operations
- Value-Focused Thinking
 - Nine Benefits how their relate to EBO
- Conclusions

Effects Based Operations

Operations conceived and planned in a systems framework that **considers the full range of direct, indirect, and cascading effects**, which may—with different degrees of probability—be achieved by the application of military, diplomatic, psychological, and economic instruments. [RAND, 2001]

Because EFFECTS measure how well we are achieving our objectives and values.

This slide defines Effects Based Operations (EBO) with the description from the RAND Corporation publication of the same name. It also has animation that first asks the question of why we are concerned with the effects of an operation. The obvious answer is that they are the best way to measure progress in terms of the decision maker's values. Often commanders will accept proxy evaluation measures and consider them sufficient to gauge their progress. This was very common in Vietnam with the enemy killed counts and the established hamlets count as measures of how well the US was winning the war. In hindsight we can easily recognize that first these measurements were inflated/inaccurate, and that they didn't measure the true level of success. They also focus on very narrow or specific issues in an extremely complex environment.



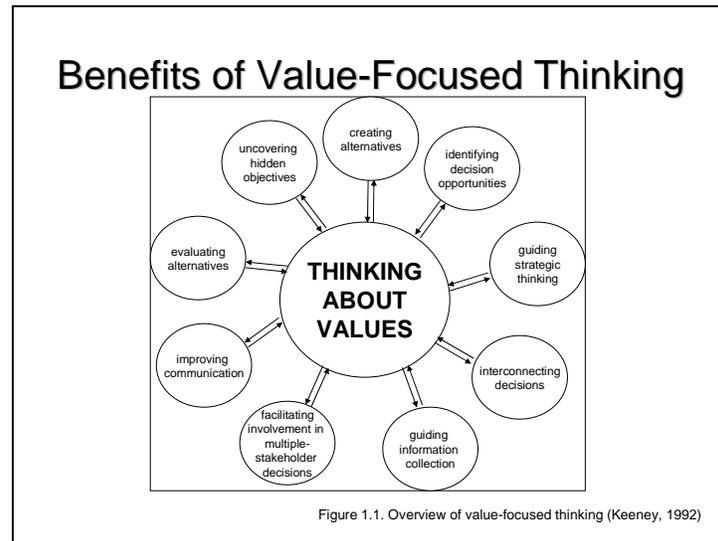
- The baseline focuses on the employment of military forces; considers a variety of materiel targets involving military forces, C3I, and infrastructure (such as power plants); goes a bit beyond head-on-head attrition when considering direct military interactions; and does exceedingly little in the cognitive/behavioral domain.
- The dashed portions of the assessment indicate where the models and analysis tend to be quite thin with respect to indirect effects.
- The second (middle) assessment acknowledges that methods that push modeling and analysis further already exist and are sometimes used. For the most part, the expansion is in the range of targets considered, sophisticated targeting of physical systems, adding more features of coalitional action and information warfare, and including more aspects of maneuver (e.g., breakthrough phenomena, networking rather than pistons, deep operations, and adaptive decisions on commitment of forces).

What is so “new” about EBO?

- Commanders still consider the effects of their operations, but...
- EBO is more holistic in terms of the means
 - Look at affecting **attitudes** of soldiers and populace alike
 - Consider secondary, tertiary, and further effects of operations

Although many commanders consider EBO to be nothing new, it is a much more holistic view of military (and non-military) operations. For centuries, commanders would measure the number of enemy kills, acres of land under friendly control, and perhaps even changes in the political or logistical environment of the area of interest. Unfortunately, although these are important things to track, they don't give the whole picture and may lead to decisions that support short term/tactical objectives, but actually hurt long term/strategic ones. For instance, bombing a city to oblivion clearly eliminates enemy resistance for the short term, but could lead to resentment from the local populace, leading to a protracted conflict or delay in transitioning into stabilization operations.

Slide 6



This graphic is copied from Ralph Keeney’s 1992 book “Value-Focused Thinking”. It shows how the nine benefits of using value-focused thinking all support the main idea of making all decisions taking into account the decision-maker’s values. Each is explained in a subsequent slide.

Value-Focused Thinking Benefit (1 of 9)

- Guiding strategic thinking
 - “A decisionmaker’s **strategic** values should be identified to guide all decisions.” [RAND, 2001]
 - “Strategic objectives do not vary from day to day.” [RAND, 2001]
 - Long-range, holistic planning
 - “Begin with the end in mind” [Covey, 1990]

USMA team (LTC M. Kwinn, et al.) created a software tool to assist commanders in OEF to assess their progress in the GWOT. This involved using VFT. Specifically, the team worked with various stakeholders and the director of staff for CTF-180 to identify its value structure. This forced the stakeholders to think about the long-term instead of immediate results. EBO demands this as well because of the secondary and follow-on effects of all operations (direct conflict, IO, or political). When planning EBO, Decision Makers (DMs) must consider not just the attrition effects, but also the impact on soldiers and morale of the population. They must think about the long-term social and economic impacts of decisions as they may lead to unacceptable/undesirable ramifications.

Steven Covey addresses this concept with the phrase “Begin with the End in Mind” that simply means to make all your decisions with the endstate as your goal or focus.

Value-Focused Thinking Benefit (2 of 9)

- Facilitating involvement in multiple-stakeholder decisions
 - Opposing stakeholders (nations, services, NGOs, etc.) must explain what is important to them. If it is valid it adds much strength to their objectives/opinions as does the contrary hurt them.
 - Stakeholders may learn that they can help (or avoid hindering) other stakeholders

With multiple stakeholders involved in all decisions of any significance in all levels of decision making in war or OOTW, all participants must be able to come to the table prepared to make their case. If the case is valid (the value is legitimate) it should be included in the value model, otherwise it will be denied. This serves two purposes: 1) It supports the idea of uncovering hidden objectives (explained later), and 2) gives ownership to the participants. People like to know that they are being heard even when they don't get their way. It helps them accept the final outcome. Ideally, everyone's ideas and preferences can be accommodated, but that is rarely possible. Therefore compromises may need to be made.

Value-Focused Thinking
Benefit (3 of 9)

- **Uncovering hidden objectives**
 - Intentional deception
 - Stakeholders are forced to admit legitimate reasons for alternatives
 - Inadvertent oversight
 - Provides trace-ability
 - Generates new ideas and overlooked objectives

There are two types of hidden objectives: 1) intentional – where the stakeholder doesn't want to expose their ulterior motives because they may not be acceptable to others or may be embarrassing or damaging to that stakeholder. 2) unknown objectives – these are unanticipated goals of the stakeholders that only come to light when they address what is the underlying goal of the organization. Either way, by identifying all the objectives in an open way, it allows for traceability from the decision(s) back to the objective(s) that it(they) support.

Value-Focused Thinking Benefit (4 of 9)

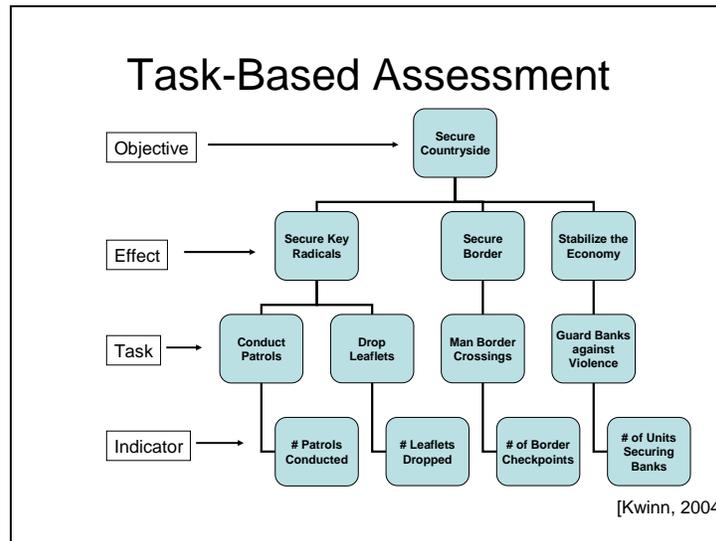
- **Creating Alternatives**
 - Creativity is perhaps one of the most important elements of effective alternatives
 - Instead of just comparing alternatives, VFT generates new ones.

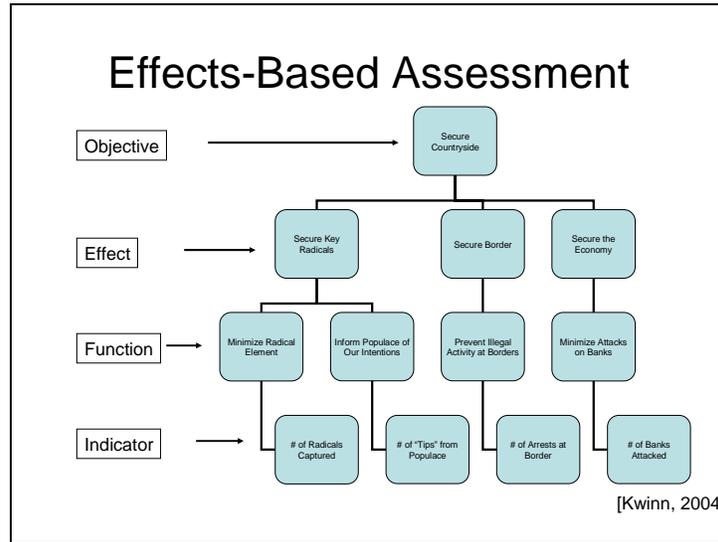
Quite often, simply by presenting the true reasons (objectives) for a mission, the stakeholders and DM can identify ways of accomplishing the mission that supports one or more objective. These ways often will be considered “outside the box” alternatives because they are not biased toward the status quo solutions. They are only limited by the creativity of the analysts.

Value-Focused Thinking Benefit (5 of 9)

- Evaluating alternatives
 - By explicitly defining the stakeholders' values, alternatives can be objectively and effectively compared
 - Avoid using arbitrary or inappropriate metrics to measure effectiveness/quality of an alternative
 - Effects-Based vs. Task-Based [Kwinn, 2004]

Similar to identifying hidden objectives and creating new alternatives, this benefit provides a way of tracing each decision back to an underlying objective and then measuring the outcomes in terms of those objectives instead of some arbitrary proxy that may have no true relationship to that objective. An example would be from OEF, where commanders counted the number of patrols as a way of measuring how well the US was influencing the actions of the enemy and local populace. By simply increasing the number of patrols (using this chain of thought) we could continue to improve how well the US and its allies were being perceived by the Afghan people and how well we were establishing/maintaining security in the region. The next two slides show a before and after example of this concept. The first slide shows how the commander was measuring his success before using a VFT mindset. The second shows a more effective method of doing the same thing.





Value-Focused Thinking Benefit (6 of 9)

- Identifying decision opportunities
 - Instead of waiting for a “decision PROBLEM” to solve, look for ways to be proactive.
 - Involves consideration of values
 - Looks for ways to support them
 - before getting into a situation requiring mitigation of negative effects.

Instead of waiting for a problem to develop, VFT allows leaders to identify opportunities to prevent problems before they arise. Leaders can improve their situation from the status quo rather than trying to return from a substandard position back to status quo.

Value-Focused Thinking Benefit (7 of 9)

- Interconnecting decisions
 - Look for decisions that support multiple objectives/values
 - NGOs, military, and governmental agencies can look for alternatives that support all of them simultaneously
 - Show opportunities for stakeholders to assist other stakeholders

Ideally, VFT permits leaders to conserve limited resources by developing alternatives that provide the best results with respect to several objectives (decisions). Creative leaders can see how an alternative will benefit them in multiple ways because the effects of an operation directly or indirectly impact more than just a single objective. A simple example is of a large unemployment problem in an area where there is an insufficient pool of drivers to deliver water to the populace. An option would be to hire local citizens to be drivers of the water delivery vehicles.

Value-Focused Thinking Benefit (8 of 9)

- Guiding information collection
 - “The values relevant to a given decision situation indicate what information is important.” [RAND, 2001]
 - Only collect information that is relevant to your values.
 - Avoid wasting effort collecting insignificant facts (unnecessary metrics).

Time is such a precious resource to commanders that VFT should be accepted by them immediately. At a minimum, it can assist them reduce the time spent collecting information that doesn't assist them in their objectives. Every hour spent collecting and organizing statistics on an irrelevant activity is an hour wasted. If a metric doesn't show the DM or stakeholders how well an operation is doing in terms of their objectives, then it must be considered unnecessary.

Value-Focused Thinking
Benefit (9 of 9)

- Improving communication
 - Avoids technical jargon (especially important in joint and combined operations)
 - NGOs and other civilian activities are able to effectively interact with the military

Lastly, VFT facilitates communication between stakeholders from diverse backgrounds and clients, decision makers, etc. It does this by forcing all parties to speak in a common language instead of technical jargon that outsiders are probably not familiar with. For instance, Doctors without Borders may not be able to understand all the military acronyms and jargon, but when they and the military put their values on the table, it allows them both to better understand one another. This also supports the concept of improving stakeholder involvement by allowing all participants to share their ideas and values with the team.

Conclusion

- Value-Focused Thinking is a powerful tool to improve Effects-Based Operations
- Planners and leaders must think in terms of values and outcomes, not tasks and completion of those tasks

In conclusion, leaders at all levels should consider the advantages of thinking from a value-focused perspective instead of the traditional alternative-focused one. It will lead to decisions that better support their strategic goals and objectives.

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