

Does 1 + 1 Really = 2?

Can You Book-keep Success?

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"War is bounded by the referential extremes of the prebattle roll call and the post-battle body count, and is constituted within by the mundane and innumerable calculations (days counted, supplies counted, miles counted). ... Indeed, counting is a speech act so pervasive during war time that it approaches an ideology; it is thus not simply a formal or typological question (What shall I count? How shall I count?) but also a fundamentally ethical one (Who counts? Do I count?)." *James Dawes*

The Language of War

Our opening quotation comes from the chapter "Counting on the Battlefield: Literature and Philosophy after the Civil War" in which Dawes traces the roots of our military bookkeeping culture to 1860s literature.

While senior leaders espouse the theory that military transformation is about culture change, the irony is that their unquestioned "theory in use" is principally to cre-

ate a culturally comfortable bookkeeping design (or in popular jargon, "road map" or "dashboard metrics") to execute transformation. A quest for a metric is really a quest to find a cause-and-effect relationship and assess the impact of a particular project or activity—the hallmark of early industrial age scientific management. While some impacts are often numeric in nature (improve sales by 20 percent) they can also be qualitative (improve workforce commitment levels).

The bookkeeping-speak phrase "measure of effectiveness" (or MOE) has an invisible meaning—"measure of (cause and) effectiveness"—that clearly indicates a cultural quest for prediction. The DoD has created expensive "laboratories" for "experiments," giving bookkeeping techniques emphasis in an even larger search for cause-and-effect relationships and better MOE. Metrics continue to represent a socio-psychological penchant for determinism in the military, and the tacit acceptance of bookkeeping as an organizational ideology creates a range of challenges that military leaders need to understand and appreciate.

The Good

Some of the benefits of metrics are:

- Providing defined goals and scopes for projects, allowing for more concrete design, planning, and implementation. In effect, managers are saying, "This is what we plan to do, and this is the benefit it will have."
- Providing very specific success criteria for projects.
- Allowing outcomes to be assessed at the end of implementation. This is especially useful to account to stakeholders.
- Having the psychological value of reducing anxiety in the face of uncertainty by providing the assumption of control and predictability.

... And the Bad

Some shortfalls are:

- Unconsciously adopting a paralysis-by-analysis mentality at the expense of a learn-by-doing mentality (for example: We have to maneuver against the enemy in order to learn about him).

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- Confusing quantitative knowledge (the superficial nature of "spreadsheet readability") with the quality of wisdom (intimate, in-depth understanding). As Henry Mintzberg says in his 1994 book *The Rise and Fall of Strategic Management*, "The essence of wisdom ... lies not in what is known but rather in the manner in which that knowledge is held and in how that knowledge is put to use." Or in the ancient Chinese wisdom of Tao Te Ching, "He who is truly great does not upon the surface dwell, but on what lies beneath."
- Making linear assumptions of causality vice appreciating the complex, interactive, dynamic patterns of causality. Werner Heisenberg, the father of quantum mechanics, profoundly said, "What we observe is not nature itself, but nature exposed to our method of questioning." Indeed, numeric appraisals in quantum physics have revealed that light is a wave or a particle depending on how you measure it.
- Jumping to implementation of solutions without taking time to understand an ever-changing problem as a continuous process.
- Assuming that by breaking down the system into measurable segments or by deconstructing the processes within, the sum of the parts will equal a measure of the whole (for instance, not recognizing that military "operations" is larger than the categories we have created to measure it).
- Failing to consider other process options because one has selected measures for the process in use.
- Reinforcing one's cultural penchant for low-cost and high-speed measuring versus appreciating the richness and quality of observing and experiencing the actual activities in progress (in other words, failing to recognize that the numbers don't prescribe what to do next, people do).

Need for Perspective

The military's love affair with metrics and bookkeeping has—perhaps dangerously—become the military culture's pretense for knowledge, whose purpose is to limit the cost of human imperfection. Military bookkeeping methods are seen as equivalent to the scientific meth-

ods found in the natural sciences, and senior leaders hardly recognize that the underpinnings of the study of conflict belong more to the philosophy of the humanities. The current process is devoid of moral reasoning and is based on an economic logic of cost-benefit and resulting risk analysis. And senior leaders often treat the resulting information as having been generated by full analysis and balanced assumptions rather than by a bounded examination of alternatives and by biased assumptions.

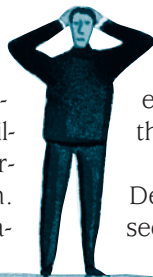
The underlying logic of the natural sciences is quite different from the humanities. If physical science produces a theory that the sun is the center of the universe, the objective truth is still unchanged (and today we have substantive evidence that the sun is not). For the military culture to self-discover that bookkeeping is a form of mythology is unlikely. This is because its unquestioned belief in bookkeeping has produced information processes that have become culturally reified. (Reification is

a cultural programming process, which, over time, treats an abstraction or mental construct as reality.) In human conflict, uncertainty and ambiguity are the underpinnings of theory, not the fictitious consciousness of certainty and clarity that a bookkeeping mentality promotes. On the other hand, military art, better seen as a branch of the humanities, proposes an almost indescribable aesthetic quality, loosely portrayed by words such as "impressionistic," "talented," "creative," "amusing," "imaginative," "improvised," and "impromptu."

In 1963, James R. Schlesinger, in his book *Quantitative Analysis and National Security, World Politics*, reduced the Pentagon problem of managing the military into two parts: "(a) how much resources to divert to defense, and (b) how to use such resources."

Schlesinger (appointed secretary of defense in the early 1970s) painted a world of predictability through detailed analysis and signified how operations research was now to be fully embraced by the defense community.

Despite the U.S. debacle in Vietnam—a conflict overseen by Robert F. McNamara's Pentagon whiz kids with the bookkeeping artifacts of



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The frequently unseen assumptions associated with a metrics-oriented culture imply that the numbers both define and portray the complexity of the problem. That analogy is like trying to interpret what is happening in a football game by watching only the scoreboard. Even though numbers are historical data and constitute retrospective information, the cultural assumption is that trends will continue. But we all know there are too many intervening and interactive variables to make forecasting just on the basis of metrics reliable.

body counts and “stop light” charts representing probabilities of Vietcong strongholds—defense leaders emerged with an even greater penchant for metric-style thinking. For example, the planning, programming, and budgeting system evolved and spawned offspring like the Joint Capability Integration Development System. The result is that the military’s metric-dominated culture has embraced bookkeeping techniques to measure the “success” of effects-based operations.

In a recent two-hour, high-level meeting in the Pentagon, senior leaders debated what logistics performance metrics should be. While metrics are important to help set standards to assure timely deliveries to the customer, how those metrics (once determined) would help drive transformation of the military logistics system and culture is questionable because focusing so much on metrics drivers inhibits out-of-the-box thinking about innovative and “disruptive” ways of resupplying the joint force. One has to wonder how spending so much time on metrics (as we have now done for almost 50 years since the advent of the Uniform Military Material Movement and Issue Priority System) will help achieve the family of logistical attributes demanded by future joint operational concepts that emphasize distribution and resupply of modular packages through nonsecure lines of communication.

Over-quantification can preclude learning. Peter F. Drucker addresses the learning problem this way in his book *The Effective Executive*: “To be able to quantify, one has to have a concept first The truly important events on the outside are not trends. They are changes in trends Executives may become blind to everything that is perception (i.e. event) rather than fact (i.e. after the event). The tremendous amount of information may thus shut out access to reality.”

Furthermore, the military culture tends to assume that the best solutions come from the top; this is why the top gets to choose which numbers are to be reported. The danger is that if the wrong metrics are put in place, they will distract from the real issues. At worst, they can entrench undesirable behavior or reduce productivity. This approach of measuring from the top down can hamper those who deal with the day-to-day solutions by developing new processes that make the numbers obsolete.

In March 2005, Defense Secretary Donald Rumsfeld said, in an interview from the Pentagon, “We have a room here, the Iraq Room, where we track a whole series of metrics. Some of them are inputs and some of them are outputs. ... No one number is determinative. ... We probably look at 50, 60, 70 different types of metrics. ... We come away with ... an impression—it’s impressionistic rather than deterministic.”

In other words, while metrics can help to identify or alert us to a problem, they cannot present the “right” solution. There is still a need for individual thought and experience and for the ability to reason through the problem in order to find the optimal solution for each unique situation. Conducting operations across the full range of missions requires creative capacity. Those who choose to become metric hawks risk falling prey to the trap of *what* to think and destroying over time their ability in *how* to think. Surely post-9/11 conflicts have taught us we can no longer afford these sorts of “competency traps.” As we have learned, some things we just can’t keep book on, and when we can, we often find that the numbers don’t add up.

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