Operational Design: Promise and Problems

Adam Elkus and Crispin Burke

Approaches to Operational Design have become increasingly prominent in both Army and Joint contexts. Design, like all doctrines, is a product of specific political, organizational, and cultural forces, events, and influences both unique to the armed services and external to them. A product born of the US military’s experience in counterinsurgency and nation-building campaigns, Design is a process best applied in the planning of campaigns and major operations. It is part of a general family of ideas inspired by FM 3-0 Operations. There are, however, substantial risks in the adoption of Design that must be addressed. Additionally, campaigning needs to be thought of as an aspect of strategy rather than a wholly separate operational level in order to best implement American strategic objectives.

We will first attempt to define the concept within the prism of recent military doctrine and the general idea of campaign design. We will then examine the doctrine’s major claims about complexity in military affairs before moving on to a discussion of concerns over Design vis-a-vis more traditional planning ideas, and conclude with some recommendations about the evolution of campaign design in relationship to strategy.

Evolution of a Concept

Given the pace of doctrinal debate and the evolution of the concept, there is dispute over what Design is and what it constitutes. There has also been a good deal of hype surrounding the concept that has only grown as defense reporters have become more aware of the issue. Given the controversy surrounding the subject, we seek to add to the literature by conducting an assessment of the concept, its strengths and weaknesses, and its larger context.

First, although the Design we talk about is mainly a product of the Army’s Training and Doctrine Command (TRADOC), School of Advanced Military Studies (SAMS), and Combined Arms Center (CAC), talk about the design of major operations and campaigns has been ongoing since the 1970s. A consistent theme in recent military theory and doctrine has been an emphasis on the visualization of the problem prior to (and concurrent with) planning. The Academic Year 2008 Army War College Campaign Planning Handbook, for example, has a section on campaign design in a joint context focused on framing that echoes much of the language that would later be

---

seen in more controversial products. Joint Publication 3-0 *Joint Operations* contains a chapter on operational design in the context of campaign planning, as does Joint Publication 5-0 *Joint Operation Planning*. Both usages of the term are more or less identical to the definitions later emerging in Army doctrinal products, although of considerably less scope.

Before all of this, however, in the October 2006 edited Marine Corps Concepts and Plans Division compilation *Thoughts on the Operational Art*, Lt. Col. Lance A. McDaniel, Captain Shane Long, and Steven A. Hardesty wrote about operational design and campaigns within the context of interagency campaign design and the idea of the campaign itself. John F. Schmitt also introduced what he called a “Systemic Concept for Operational Design,” which drew explicitly on systems theory. Many of the ideas introduced in the essays would parallel the Army’s doctrinal development, though there are important similarities. Similarly, the ultimate source for the focus on the design and planning of campaigns emerged primarily from the military intellectual renaissance of the late 1970s and early 80s.

In 2008, the Army’s FM 3-0 *Operations* defined Operational Design as the “conception and construction of the framework that underpins a campaign or major operation plan and its subsequent execution.” FM 3-0 describes the process as consisting of framing (or reframeing) the problem, formulating the design, and refining the design. These conceptual frameworks help commanders understand, visualize, and describe combinations of kinetic and non-kinetic action, which assists them in formulating their intent and guidance. FM 3-0 expanded on the definition already present in Joint Publication 3-0: *Joint Operations* and other doctrinal publications.

The current understanding of Operational Design is simply called “Design” and was elaborated in the TRADOC Pam 525-5-500 *Commander’s Appreciation and Campaign Design* (henceforth referred to as *CACD*). Design emerged in 2006 in the Army, incorporating elements from retired Israeli Brigadier General Shimon Naveh’s earlier version of Systemic Operational Design (SOD). The connections between the two doctrines are porous and somewhat uncertain; nevertheless, the IDF’s SOD and the US military’s Design are not synonymous, despite similar-sounding names. Rather, Design, a creation of the US Army School of Advanced Military Studies (SAMS) is defined as “learning about an unfamiliar problem and [exploiting] that understanding to create a broad approach to problem solving.” Design lays out a specific methodology for creating a systemic and shared understanding of an operational problem and a broad approach to its solution. The TRADOC pamphlet built on the earlier understanding

---

4 See *Thoughts on the Operational Art*, Quantico: Marine Corps Warfighting Laboratory, October 2006.
6 Ibid.
7 Ibid.
9 *CACD*, p. 4.
established in *FM 3-0 Operations* but introduced several notions built on social theory about so-called “wicked problems.”

*CACD* described three types of problems—well-structured problems, medium-structured problems, and ill-structured problems. Well-structured problems are more based on perfecting a certain technique and finding the right solution. As the problem is self-evident, structuring is not an issue. Medium-structured problems are issues for which structure is agreed upon but specific actions vary. A desired endstate, however, is agreed-upon by most. Ill-structured problems are those whose structure is indeterminate and professionals disagree on the solution, desirable endstate, and whether the goal is achievable. *CACD* made the argument that ill-structured problems were likely to characterize future operations, and thus a focus on clarifying higher guidance and the relationship of the campaign to the larger strategic approach was needed.

To wit, *CACD* proposed a methodology for the “Appreciation” of these problems and their linkage in a campaign design. This is heavily based in collaborative problem-framing to establish the strategic context of the operational problem. Controversially, *CACD* grounded its explanation of campaign design with a systems and complexity perspective. “Commanders must approach operational problems from a holistic systems perspective,” *CACD* noted. To be clear, such an approach, though rooted in certain newer kinds of planning and decision theory, is to some extent a process that commanders throughout history have intuitively grasped.

*CACD* was followed by a flurry of papers in *Military Review* and Ft. Leavenworth’s Combined Arms Center blog detailing the concept, and a 2009 book by Dr. Jack Kem of the Army Command and General Staff College called *Design: Tools of the Trade*. Debate then ensued about the merits of the doctrine in military forums such as the *Joint Forces Quarterly*. In the current Army Capstone Concept, Design is discussed multiple times as a requirement for future operations. The latest draft of FM 5-0, *The Operations Process*, is being rewritten to reflect Design concepts as an element of operational adaptability. A draft manual of FMI 5-2 *Design* is also currently circulating around military circles that expands upon many of the ideas in *CACD*.

*Design: Tools of the Trade* took several of the concepts discussed in the *CACD* and FM 3-0 and rephrased them in language that would be repeated in the Army Capstone Concept:

“The central role of the commander in battle command is also strengthened in FM 3-0; the addition of the concept of ‘understanding’ and ‘framing the problem’

---

10 *CACD*, p. 9.
11 *CACD*, p. 20.
12 *CACD*, p. 5.
13 Among many sources which note this can be found in an attachment to a memorandum dated October 6 2009, written by US Marine Corps General James N. Mattis, entitled “Vision for a Joint Approach to Operational Design”.
16 See http://usacac.army.mil/CAC2/FM50/
prior to ‘visualizing’ the endstate and design of the operation represents a step forward in operating in today’s environment.”

*Design: Tools of the Trade* also emphasized collaboration (“battlefield circulation”) and the reframing of the endstate as conditions evolve, otherwise known as the “running estimate of the situation” in older doctrinal concepts. This concept reflected more of the Battle Command framework than some of the more esoteric ideas chronicled in *CACD*. The family of doctrine started by 2008’s FM 3-0 provided the basis for many of the elaborations of Design ideas established by Dr. Kem’s monograph. Not coincidentally, a SAMS paper by Maj. David P. Henry made the argument that many of the collective approaches inherent in the Battle Command framework expressed the understanding of Design, but were distributed across a series of doctrinal publications rather than one or two main manuals. Existing Army doctrine, Henry argued, provided the results Design advocates needed, but was poorly articulated. Thus no new terminology was needed, only a more concrete visualization of older doctrine.

The key difference between the older Joint and Army War College approaches and the Marine Corps and Army doctrines is that the older approaches are rooted in terminology taken from the Arthur Lykke Jr. strategy model whereas the newer Army products mix this with system terminology. Joint Publication 5-0, for example, does not discuss the framing elements but instead is rooted in more familiar terminology such as lines of operation, decisive points, and Centers of Gravity (COGs). The Marine Corps essays have elements of what would later emerge in the Army doctrine.

As General James N. Mattis has called for a “Joint Approach to Operational Design,” it is likely that the terminology and doctrine will continue to evolve. Mattis praised the Army’s efforts to “design a broad approach to achieving objectives and accomplishing the mission; and to determine if, when, and how to change that approach when circumstances change.” Mattis’ paper also called for adopting the Army concept of the Operational Approach, a “visualization of the broad general actions that will produce the conditions that define the desired endstate.”

**Complexity, Strategy, and Historical Context**

A constant theme in Design-related writings regards a perceived sense of increasing complexity of modern military operations, particularly in counterinsurgency and stability-support operations. Such complexity, as we will argue, is a lived experience of present strategic conditions, not a sign that things have become vastly more complex than before. In order to set the context for the role and design of campaigns, we need to first set the context of what complexity really exists.

---

18 Kem, p. 35.
20 Mattis, p. 1.
21 Mattis, p. 4.
Marine Corps Lt. Col Alex Vohr notes in a critique that the strategic assumptions of CACD itself are rooted in the erroneous idea that the present operational environment is more complex than those of past conflicts, an idea drawn from the application of General Rupert Smith’s “war amongst the people” framework. While certainly different kinds of complexities (albeit ones that the United States has not traditionally performed well, elaborated upon later) are at work in the present operating environment, the claim that present conflicts are worlds more complex than those of the past is not supported by the historical record. The present environment is not more complex, nor was the past environment simple.

The complexity of past conflicts has often been flushed down the memory hole. For example, at the strategic level, the Cold War posed a challenge for the West (and the United States in particular) of immense proportions. The sheer complexity of the deterrence debate and its connection to limited wars and guerrilla conflicts in the Third World still baffles the experts over twenty years after the fall of the Berlin wall. On the operational level, as David Zabecki notes, World War I was not as linear or straightforward in portrayed in popular history. Nor, unfortunately, is the US military’s lack of preparation for the complexity of operations in a new theater of engagement a new problem. The early defeats in North Africa during World War II and other debacles chronicled in America’s First Battles offer disturbing parallels to present conflicts. These challenges were all complex in their own right, and viewing them as straightforward is a recipe for future problems in doctrine and education.

While the basic spirit of war remains the same from the first chariot charge to the latest bombing in Pakistan, warfare changes with the ebb and flow of geopolitics, weapons, methods of communications, technology, and social forces. When people usually write about the complexity of the modern operating environment they mention 21st century operational conditions such as globalization, the increasing rapidity of communication, and challenges from both state and non-state subaltern figures to state dominance. This represents a shift in different kinds of complexity from the previous complex threat of the Soviet Union and its allies in the Third World and the Eastern bloc. The perception that these factors are necessarily unprecedented and radically new is evidence that existing modes of thought have not really prepared defense thinkers to adapt to uncertainty that always exists, a problem that Army documents such as the Army Capstone Concept address with their focus on adaptability. This is why, as Colonel Gian P. Gentile insightfully pointed out, historian Brian Linn is correct to note that “adaptation” is the only real American “way of war.”

It may be more fruitful to observe that the complexity experienced in the context of new wars is mostly complexity generated by specifically American factors—grand strategic uncertainty, the growing doctrinal problem of “compression” and its relationship to a dysfunctional “whole of government” approach, and geopolitical shifts in American strategic primacy. These factors

worsen the well-covered American military difficulties in adapting to 21st century operational conditions.

Grand strategic uncertainty is the first trend which has given the contemporary operating environment an aura of complexity. Indeed, it is hardly an original observation that the post-Cold War period has been one of strategic drift. Geopolitical thinker Zbigniew Brezinski, for example, sees the 1990s as a time of ad-hocery, both through a combination of a lack of strategic vision and an inability to implement those visions when they were present. Although some may ascribe this to the breakdown of the Cold War consensus and the desire to focus on domestic issues, longtime students of American strategy such as Colin S. Gray disagree. In an prescient chapter in the 1994 compilation *The Making of Strategy: Rulers, States and War*, Gray noted that the American process of making strategy was simultaneously raucous and disorganized but also managed to ensure that different strategists ended up making the same mistakes.

The search for a grand strategy can sometimes resemble the search for the Holy Grail or the fountain of youth—a quest for a religiously desired object that always remained out of reach yet tantalizingly close to true believers. Although Michael Lind states in *The American Way of Strategy* that the goals of American grand strategy have remained remarkably constant, the realization and expression of those goals has always proven difficult in a democratic system rooted in a fractious and often divided domestic polity. Of course, this is probably better than a rigid plan devised by a central planner who cannot, by definition, know everything. China, for example, had to suffer through years of international isolation and autarky before a truly enlightened central planner such as Deng Xiaopeng realized that the country’s grand strategic destiny lay in the “four modernizations.”

Nevertheless, the lack of clear grand strategic paradigms, especially in an environment in which the United States is much more internationally committed and connected than it was a century ago, filters down into military strategy and operational doctrine. The standard problem-solving framework of ends, ways, and means in campaign planning, for example, becomes more complex when the basic strategic material from which the campaign is derived is hazy or otherwise uncertain. This is why the Powell Doctrine—the idea that force should only be employed when a set of exhaustive strategic requirements were met—was admirable but unrealistic in its expectation of strategic sanity. Within the course of American military history, strict clarity is always demanded of the endstate. However, pragmatic experience has shown that our efforts often fall short of expectations.

As military historian Bruce I. Gudmunsson observed in a review of the “banana wars” of the early 20th century, the decision-making demands placed on smaller echelons is also not new as

---

31 Robert M. Cassidy, “Prophets or Praetorians? The Utoponian Paradox and the Powell Corollary,” *Parameters*, pp. 130-143.
well. Expeditionary forces intervening to protect commercial interests in Latin America found themselves in the midst of complex political disputes in which tactical actions had potentially strategic political consequences. This is not to say that operations have always existed in a strategic vacuum. Pre-war planning for World War II was extensive and provided a framework in which campaigns and major operations were designed under a tightly-run administration.

A second clear trend is the complexity of missions in the contemporary operating environment. Again, as we have emphasized before, these missions, while just as complex as previous missions, spring from different kinds of complexity that have caused issues for forces seeking to adapt. A major contributing cause of the complexity is the overall weakness of civilian agencies and interagency bodies often cast to carry out American foreign policy on shoestring resources. US Army War College Professor Steven Metz, for example, wrote an important article about the lackluster results of the “civilian surge” and its implications for a truly comprehensive approach to stability operations. Lack of effective support from non-military sources of national power creates the need for more expansive military missions in which general purpose forces (GPF) often become force providers for specialized tasks once left to Special Forces, civil government and non-governmental organizations (NGOs). Whether or not these missions actually are more complex than facing down a conventional opponent, they certainly feel complex to those who carry them out, often making it up as they go along. Past operations also underscore the fact that this is not a new problem. Maneuver combat interposed with reconstruction operations or rear-area refugee issues, for example, is a complex part of past military history.

Multiplying missions with insufficient cognitive or material resources to accomplish them have also resulted in more expansive operational doctrines. The expanding cognitive requirements of new missions puts greater demands on the operational art, which has begun to surpass the already tenuous barrier constructed between it and national strategy. In a recent monograph for the Strategic Studies Institute, Australian military thinkers Justin Kelly and James Brennan argue that emerging concepts of operational art take it into new and more complex territory that it hitherto has not covered before. The metaphor they suggest is that of a ravenous creature devouring strategy like a B-movie rubber suit monster.

A strong feature of new operational doctrine and military publications is the idea of holism. As Kelly and Brennan argue, works such as the Joint Operating Environment (JOE) and the British Comprehensive Approach aspire to create a holistic understanding of the operating environment and interagency capabilities to translate the understanding into concrete action. In part, this has the unavoidable consequence of impinging on strategy’s preserve, as any holistic understanding

36 Ibid.
of the environment or comprehensive approach by definition builds what Milan Vego calls an “artificial bridge” to policy. 37 Moreover, it also may be beyond the means available to execute such options in an ultimately divided government.

Another solid point that Kelly and Brennan make is that the trend of what many call “compression” is a sharpening of the traditional kink between strategy and tactics. 38 At the same time, the “operational art” framework still increasingly awkwardly sits between tactics and strategy like a member of the family who does not exactly know where to sit at the annual Christmas dinner. Our understanding of levels, the relationship between them, and the concepts of operational art are changing (although they have never remained static in the first place). As Kelly and Brennan argue, there is not enough of an understanding in strategic thought of how porous and interlocking the different levels of engagement are, and the vital conversation that must go on between them. 39

Lastly, the geostrategic situation also amplifies the issue. It is uncertain whether or not we are shifting towards a truly “post-American” world. Declinist literature vastly overstates the case, which, in some cases, is based more on the emotional temptation to gloat at the humbling of the giant. 40 But it is certainly clear that a “unipolar” moment, if it ever existed, is now over. America remains a superpower, but one that also faces a growing imperative to husband its power due to growing economic, diplomatic, and great power constraints. 41 An altered geostrategic situation, albeit one perhaps that evolved as the natural outcome of post-Cold War processes, produces complexity or at least the feeling of it. 42

To sum up, the point we wish to make is that a realistic understanding of complexity should inform campaign design. The complexities we deal with today are not more complex, nor was the past ever simple. This is a foundational philosophical issue that needs to be ironed out in current military literature. In the course of adapting to the challenges of irregular operations we should not lose track of the continuities of warfare across the spectrum, and this is a philosophical issue that deserves more attention in doctrine. The primary issue, however, is whether or not the structure of the campaign as practiced can implement the overarching policy. We recommend that in future doctrine a more nuanced understanding of complexity and continuity is adopted. This can help better clarify operational and strategic approaches to the campaign.

38 Kelly and Brennan, p. 3.
39 Kelly and Brennan, pp. 8-9.
Promise and Problems

Milan Vego notes that the planning of the campaign consists of the desired strategic endstate, ultimate and intermediate strategic objective, intermediate operational objectives, resources for sources of military and nonmilitary power, initial geostrategic position (interior vs. exterior lines), the operational idea (scheme), strategic and operational direction, identification of critical factors and enemy/friendly strategic centers of gravity, the balancing of operational and strategic factors, and operational sustainment. These are all traditional elements of campaign design that came to fruition through the interaction of policy, strategy, and the Military Decision-Making Process (MDMP). In more recent years, this scheme has been complicated by the addition of things such as logical lines of operation, target value analysis, and John Warden’s Five Rings concept. Effects-Based Operations (EBO), though recently out of favor, was a large part of the campaign planning framework as well. The result is something of a mixed bag with traditional Jominian concepts such as lines of operation mixing with innovations such as logical lines of operation and more recent system-based concepts such as EBO.

As previously mentioned, Design distinguishes between “well-structured” problems—such as a defense against a Soviet Division Tactical Group—which have a generally agreed-upon solution and ill-structured problems. These situations range from issues for which there is not necessarily one “right” answer to situations so intractable that professionals cannot necessarily even agree on a common definition of the problem. This basic idea lies at the root of the Design literature, with CACD being the most prominent document. To deal with problem-solving, Design proposes a methodology designed to try to define the mission, which begins with “framing” the problem by trying to understand it within a system context. This is premised on the belief that the “wickedness” of wicked problems arises from failure to understand it within the context of larger factors which do not usually enter into the Military Decision-Making Process (MDMP). MDMP, which is typically used at the battalion-level and above, is often characterized by Design advocates as a linear and mechanistic method which, while effective in solving many well-structured tactical problems, has shown itself to be ill-suited for wicked problems, typically found in questions of campaigning in strategy.

Writing in the latest issue of Armed Forces Journal, T.C. Greenwood and T.X. Hammes summarize the distinction, arguing that

“During the Cold War, the problem of deployment loomed so large that the U.S. focused its planning process on quickly deploying forces from the continental U.S. This was a natural result of the first imperative of U.S. military planning: transporting forces thousands of miles, marrying them up with their equipment and moving out to engage the enemy. Since the possibility of war against the Soviets in Europe represented the biggest challenge facing U.S. forces, speed of deployment was essential. Naturally, we applied early computer technology to this structurally complex problem of marrying thousands of personnel and major

44 See Jack Kem, Campaign Planning: Tools of the Trade, Ft. Leavenworth: U.S. Army Command and General Staff College, 2009 for a concise discussion of all of the major elements of campaign planning.
end items to hundreds of airplanes and dozens of ships through a multitude of airfields and ports. Because the demand always exceeded the available lift, deployment was the first and most difficult planning problem. Further, once these forces arrived in theater, the problem they faced was well-defined: stopping the Soviets. The arriving forces were employed according to well-planned and frequently rehearsed concepts. Thus, over decades, we developed and refined the Joint Planning and Execution System to make it an effective tool for dealing with the structurally complex problem of deployment. But we mistakenly believed we could apply the same process to deal with operational level employment issues as well — that is, how to fight a thinking adversary. The cumulative impact has been several generations of military planners focused on finding solutions to what are essentially engineering or structurally complex problems rather than interactively complex problems. This is a legacy that today’s leaders must overcome.  

Mattis touches on this with his note that “our current doctrine falls short of providing a coherent operational design process that helps the commander visualize the desired state and devise an approach.” He also points out, like Greenwood and Hammes, that in recent years a procedural focus has come at the expense of creative thinking and integration of instruments of national power. So are the ideas elaborated in TRADOC pamphlet CACD and other Design products right for the job? The answer is a somewhat unsatisfying “it depends.” Any planning process—be it MDMP, EBO or Design—should be viewed as merely a tool for formulating a correct plan of action, not as the be-all, end-all solution. A poor commander and staff can craft an atrocious plan regardless of the methods which they use. Selecting the most suitable of the various conceptual frameworks can, however, greatly aid a commander and his or her staff in solving the problem at hand.

There are both strong points and strong drawbacks to the Design framework. For one, the problems that Greenwood and Hammes note are foundational in nature and go far deeper than the choice of planning methodologies. The roots of unsuccessful military outcomes can lie less in the planning methodologies used and more in the nature of the strategies they seek to execute. Training and personnel policies that do not support either strategies or planning procedures can also act to frustrate the solving of complex problems. Second, holistic methodologies have certain drawbacks that must also be acknowledged. We will cover some of these difficulties later. It is likely that commanders in practice will, as they have done in history, mix, match and modify in order to fit their own unique circumstances, personalities and strategic imperatives to the larger objective. Moreover, MDMP, however unfashionable at present, is a foundational element of conflict, past, present and future. To their credit, Design advocates do not see their method as replacing MDMP, despite stories to the contrary in some defense publications.

46 Mattis, p. 2.
47 Mattis, pp. 1, 2, and 3.
The roots of MDMP can be seen in the General Staff approach pioneered by Moltke the Elder and other Prussian military figures. Before the rise of General Staffs, wars were often won and lost by the genius (or lack thereof) of great commanders. The campaigns of Napoleon illustrate both the advantages and disadvantages of the “great man” approach. As David Chandler notes, when a great figure like Napoleon emerged on the battlefield, he could truly dominate the arena through the sheer force of his will. However, greatness is rare. And one of Napoleon’s paramount weaknesses was the extreme centralization of decision-making around his own person. As the “brains and nerve center” of the Prussian army, the General Staff distributed the genius of the commander and allowed for more efficient and disciplined planning. As Major Gregory R. Ebner argues, the MDMP also represents a commendable egalitarian approach:

The MDMP represents the egalitarianism of the U.S. Army as it allows the planning and execution of military operations without the need for singular military genius in the mind of the commander. All who come to the staff can participate and provide valuable contributions to the success of a mission through the use of the MDMP.

Disciplined planning of operations through the construct of steps such as mission analysis and course of action (COA) development is part of what has guaranteed victory in engagements past and present. The importance of clear orders cannot be overstated, especially in a massive organization composed of many thousands of simultaneous moving parts. Of course, it cannot compensate for the eternal fog and friction of war, but that is an area left more towards individual discretion and judgment, the product of quality training and education.

However, much of MDMP is grounded in certainty—turning planning assumptions into either facts or falsehoods—and does not lend itself well to ambiguous or complex situations. The enemy possesses only two courses of action—a most likely and a most dangerous course of action—which are used during a wargaming sequence which is usually based on a formulaic approach. Furthermore, MDMP begins with mission analysis, which is usually gleaned from the operations order of a higher unit. In the Joint Operations Planning Process (JOPP), Greenwood and Hammes note that “the planning process starts with initiation and quickly jumps to mission analysis. Unfortunately, this approach is often reflected in our planning process when we completely overlook the critical step of developing a working definition of the problem. Instead, we assume that the problem will already be defined by the political leadership.” This is why

52 Greenwood and Hammes.
civil and military thinkers are looking for different models of planning campaigns that integrate different elements of national power.

Of course this is by no means a new problem. In the run-up to World War I, German planners such as Helmuth von Moltke the Younger implemented a modified version of the informal memorandum known as the Schlieffen Plan, which called for a rapid mobilization of troops, followed by a swift invasion of France. Upon seizing Paris in a matter of weeks, the Germans would then re-direct their forces to the Eastern front to thwart the much slower Russian advance. Among many other failings, Moltke and his staff made the fatal assumption that Russia would not be able to mobilize in less than six weeks, and that their sweep through Belgium would not stir many Belgians to undertake guerrilla action against their logistical supply lines, which ultimately delayed their advance. Most importantly, the German war plans took little account of the political impact of their actions—they neglected the fact that offensive action against France would draw all of Europe into war against them. 53 This was almost a caricature of the MDMP in its extrapolation of purely military considerations into the political-military arena, where politics was made to fit the dictates of military strategy instead of vice versa.

It is worth contrasting this with Moltke the Elder’s campaign in 1870 France during the Franco-Prussian War. In Bradley J. Meyer’s words, Moltke, “used his operational goals…as a goal or desired state toward which he directed operations, adjusting his operational decision-making to circumstances as he went along.” 54 While keeping a clear idea of the political goals to be accomplished in mind, Moltke was sensible enough to realize that the planning and prosecution of the campaign depended more on adaptation once the campaign had begun than detailed planning of every single aspect of operations. His nephew, Moltke the Younger, preferred a more mechanistic approach. It was this flexibility that also helped when the defeat of the French army failed to end the war. Moltke the Elder and Bismarck’s combination of adroit political and military maneuvers were enough to deal with the unforeseen consequences of the war, such as the factionalization of the French government and what might be today called a “hybrid” campaign by guerrillas and regulars. This averted what could have been a large setback in Phase IV operations. Historian Geoffrey Wawro wrote a prescient article in 2003 comparing this campaign to the early stages of the Iraq War. 55

Although Design literature never mentions the term, it overlaps somewhat with what Vego calls “the operational idea,” an overarching idea of how to employ forces to achieve the assigned military objectives. The term originates from late 19th century German sources and was later refined by Soviet theorists. Developed during the commander’s estimate of the situation, it provides the framework in a campaign for subordinate major operations and is refined throughout the planning process and altered if the strategic situation warrants a change in the initial idea. 56 This encompasses some selected elements such as operational sequencing,

56 Vego, p. IX-103.
branches, sectors of main effort, sequels, and method of defeating the opponent. It is the means, Vego argues, of destroying or neutralizing the opponent’s center of gravity.

One successful historical example of a successful operational idea that Vego provides is the German invasion of Denmark and Norway in April 1940, which employed boldness, multi-linear approach, and operational deception to overcome Allied superiority at sea. In contrast, Vego looks at how the planning of the 1999 NATO air offensive against Serbia was conducted in unimaginative fashion, as it did not employ saturation elements of airpower, lacked an effective ground threat, and failed to effectively shape the battlefield by cutting off Serb reinforcements on land and sea. Of course, success in Norway and countless other theaters was not sufficient to win the war for Germany. And NATO ultimately achieved its objectives in spite of a flawed campaign plan.

It seems that the goal of Design as a methodology is to help nurture the cognitive flexibility and creativity in the design and execution of campaigns and major operations seen in Moltke the Elder’s 1870 foray into France as they interface with the operational idea. It is a quality that, as Colin S. Gray noted in his review of American strategy, is decidedly lacking throughout modern American strategic history. In a way, this focus on methodology is another attempt to spread the genius of the exceptional commander across in an egalitarian MDMP-like fashion. This is both a strength and a major drawback of Design, as we will examine.

Although it takes a vastly different approach than Effects-Based Operations (EBO), Design, like EBO and the British Comprehensive Approach aims to create strategic holism in the framework of operational art. EBO, for example, aimed to create strategic effects through clever manipulation of the opponent’s nodal points instead of striking a COG. As extensively discussed in other dissections of the concept, the concept’s chief—and fatal—flaw was its presumption that second-order effects could be predicted. The level of information necessary to do so is never present, nor is the understanding present. As James C. Scott insightfully notes in Seeing Like a State, centrally directed domestic government social engineering schemes often fail because bureaucrats lack not only the information present but local experience and knowledge. If this is the result that occurs in domestic settings in which a common language and political culture is shared, the results abroad through supposedly scientific planning techniques are not encouraging.

Comprehensive approaches, in contrast, seek to integrate interagency effects and bring them to bear alongside military forces. This is the field of emerging theory known as “interagency operational art.” As we discussed earlier, the problem with this is that organizational resources and coordination in a divided government usually fails to follow through. Additionally, thinking about interagency coordination for interagency tasks often fails to keep pace with civilian

---

59 Vego, ibid.
60 Vego, p. IX-105.
61 Gray, p. 590.
literature on relevant subjects such as aid, development, and human security. Truly comprehensive approaches are likely to remain an aspiration, albeit a necessary one for accomplishing the given policy.

Design’s place in the emerging family of holism is its emphasis on mechanisms for construction of planning frameworks. One example of this is the emphasis on questions such as the stakeholders in the operational problem, the sources of the conflict, the geopolitics of the neighbors, the nature of the health and development services of the host government, and other elements outlined in the CACD questions. One might view CACD as a latter-day addition to Vego’s concept of the operational idea. Unlike EBO, which emphasizes the holistic achievement of strategic effects through nodal targeting, or comprehensive approaches which attempt to bring civilian capabilities to bear on the battlefield, the focus of Design literature is on understanding.

At the strategic level, where Design is most appropriate, it can provide a planning approach for enhancing the design of campaigns. As Capt. Burke details in a September 2009 Small Wars Journal blogpost, the framework of Design helps build in a larger frame of reference for the design and planning of the campaign, encompassing interface between political and military leaders. 63 As Greenwood and Hammes point out, this more than just developing courses of action but trying to create a better understanding of the problem in and of itself. They also point out that focusing on the interactions and frameworks of those carrying out planning may be a better means of improving the execution of plans than detailed planning in and of itself. Another strong point of Greenwood and Hammes is that merely trying new courses of action are not likely to be successful if the initial definition of the problem is incorrect. Lastly, they also argue that a virtue of documents such as CACD is that they recognize that terms such as “endstate” provide a deceptive aura of finality to military problems. Maintaining an equilibrium or “good enough” solution to a problem may be the only option available to a planner, and CACD suggests means that provide a more realistic way of looking at wicked problems.64

Often times, a problem will have no optimal answer. Maintenance of a steady state in which survival can be achieved is good enough. Even decisive victory in war cannot guarantee peace, as Germany discovered after smashing France in 1870 only to face a revived and militant French nation and her allies in 1914. On a grand strategic level, war and conflict are likely to continue and the resolving of one strategic problem is often the beginning of another. The decline of the first wave of Middle Eastern terrorism, associated with Third World Arab Marxist-nationalist politics, heralded an even deadlier wave inspired by a toxic mixture of radical Islam and even more radical anti-imperialist rhetoric.

One recent example of a more limited solution can be found in Israel’s 2008-2009 Operation Cast Lead, a military conflict that has not undergone as much exhaustive analysis as the 2006 Lebanon War. Many American and international foreign policy commentators saw the operation as a strategic failure. But many Israeli military commentators saw it differently as an operation that achieved a satisfactory solution to a tiny part of a 50-year old problem that would not go away any time soon. Israeli special forces veteran Ari Spiegelman argued in an interview that outsiders did not get that the “the war is ongoing, with periods of more violence and periods of

63 Burke, “Operational Design in Afghanistan,”
64 Greenwood and Hammes, “War Planning for Wicked Problems,”
less violence, during which the enemy regroups and plans his next attack. When we feel that the enemy is getting strong, we must be prepared to make pre-emptive strikes, hard and fast at key targets, with viciousness, as the enemy would do to us. Only then can we acquire, not peace, but sustained periods of calm.” Arguably, as Amos Harel and Avi Issacharoff pointed out in Foreign Policy, the operation devastated Hamas, and largely halted the launch of Qassam rockets. The operation did not totally eliminate Hamas’ ability to fire rockets, the civilian cost was high, and the resulting endstate was still problematic in that the standoff between Hamas, the Palestinian Authority, and the Israeli state remained. But it gained a measure of calm and restored the perception of Israeli deterrence. And that was all one major operation was really capable of doing for an intractable political problem. It was not a permanent solution, and there will likely be fighting again. But the operation achieved a steady state within the framework of Israeli strategy.

American strategists have trouble conceptualizing limited conflicts, despite the fact that the vast majority of American wars from 1945 onwards have been fought for limited aims. When applied to strategy, Design can help acclimatize Americans to the reality that unlimited victory is a rare rather than a steady element of military history. America is not a landpower and cannot afford to devote World War II-level resources to achieving unconditional surrender. Even when occupation and reconstruction occurs, the result is likely to be limited, as in the most recent phase of the Iraq war. Political objectives suggest that involvement in Afghanistan is being designed according to limited objectives as well.

The present debate over military doctrine in the “era of persistent conflict” is really a debate over what kind of doctrine can encompass both conventional and irregular limited wars. When skeptics of COIN fret about the ability of American forces to win major combat operations (MCOs) they are not imagining Soviet forces streaming through the Fulda gap but rather replays of limited conflicts in the Third World such as the 1972 Yom Kippur war. Likewise, the more well-regarded of counterinsurgency thinkers premise their expectations on the ideas of limited war. In this, we are in agreement with some of our chief competitors. The Chinese People’s Liberation Army professional military education (PME) textbook Zhanyixue (The Science of Campaigns) is predicated around the winning of limited wars. Design’s framework is based around a more realistic view of problem solving within the context of recent American strategy than language and mechanics that still have the air of total war to them.

Design, however, has drawbacks and risks. We mentioned earlier that it is an attempt to spread mental flexibility for the conception of operational frameworks. It is difficult to necessarily institutionalize such qualities, especially within large industrial bureaucracies. The proper mental

qualities, Gray himself noted in his 1999 book *Modern Strategy*, are exceedingly rare. 69 This is ultimately a problem that must be addressed through training, personnel policies, and organizational planning. If Design becomes a checklist approach rather than an iterative approach then it will fail its predicted purpose. If it is to be a useful tool it must be flexible and loose enough to be employed as such rather than a crutch, such as EBO. In a blog entry on the Combined Armed Center website, Major Grant Martin touched on this when he noted the similarity of Design in architectural and urban planning concepts could possibly lead to an EBO-like hubris directed towards the prediction of second and third-order causal effects that do not take into account an realistic adversary. 70

It is also important to understand the limits of Design at the tactical level. Indeed, as plans are formulated, and passed down the chain of command, Design’s uncertainty and vague language increases confusion among those who are actually at the “tip of the spear.” The importance of clear orders and directives cannot be overstated, especially at the tactical level, where greater operational control must often be exerted, and where the confusion of battle does not lend itself to complex orders. Verily, this was one of the chief complaints among troops in the Israeli Defense Forces in 2006—the vague language inherent in Israeli doctrine and plans led to ambiguous and unclear orders. Another related weaknesses is that Design, like EBO, has many different versions. The Design seen in CACD, for example, is extremely different from the original Design that appeared in monographs and articles from 2005-2007.

Any doctrine that introduces new terminology must also be consistently employed. During an interview conducted after the 2006 War, Shimon Naveh noted that the esoteric concepts of EBO and SOD were poorly understood in the IDF. According to Naveh, although the IDF’s Chief of Staff, Lieutenant General Dan Halutz, placed his signature on the IDF’s EBO and SOD doctrine manuals, he allegedly had a poor grasp of the fundamentals of these new doctrines, a predicament shared by many division commanders within the IDF. 71 In fact, unlike the US military, which generally adopts doctrine across the board as it is published, several subordinate commanders decided not to adopt EBO and SOD. Commanders operating under different sets of doctrine cannot synchronize their efforts. No planning paradigm relieves leaders of the responsibility to effectively plan and communicate clearly to their subordinates. While language at the strategic level is relatively abstract, commanders in the field need a much more clear statement of their commander’s intent. For example, orders that directed IDF units to “render the enemy incoherent” are not effective means of communicating intent, particularly to units operating in the confusion of battle. Ironically, unclear orders and communication between the IDF’s division and brigade commanders showcased one of the defining features of EBO—that of organizational paralysis. 72

---

72 Specifically, the 91st Division, as noted by Shimon Naveh in his interview with Matt Matthews.
As General Mattis and his team at Joint Forces Command (JFCOM) work on constructing a Joint Approach to Design, we expect some of the more esoteric language to erode as doctrine is refined and standardized. The process should emphasize on producing a clearer doctrine that subordinates can more easily understand. This is important in irregular warfare but in the context of more high-end combat confusion across the board will be deadly. Whatever the linguistic approach, though, anyone who employs a doctrine should be aware of its origins in order to better understand its applicability and use.

More fundamentally, the desire for comprehensiveness may exceed the cognitive, organizational, and material means of commands to realize it. The Israeli strategist Ron Tira’s criticism of EBO in the 2006 Lebanon campaign stands as a cautionary tale. The planning sought to leverage purely tactical and operational levels to strategic effect through cognitive collapse. However, in World War II the strategic choice to fight until the German Army was destroyed and its cities lay in ruins convinced the Germans to give up. True material desperation induced cognitive collapse and acceptance of defeat. In contrast, operational doctrines rooted in the usage of standoff firepower sought to achieve strategic objectives without a bloody fight or threatening the enemy with the prospect of destruction. 73 If Design is used to employ understanding and social science as the substitute for the proper application of power, it will also fail as well.

As we noted above, one of the other things we find somewhat troubling about new campaign design ideas is its congruence with a larger doctrinal enthusiasm for cultural understanding and deployed anthropological teams. These tools and innovations, while laudable, should not be taken for an idea that foreign operational environments can ever be fully understood. This would replace the hubris of 1990s-era RMA technological frameworks with those rooted in the anthropologist’s notebook rather than the orbiting satellite. Moreover, complete understanding is not necessary for victory. Vego notes that in 1943-1945, the German commander Field Marshal Albert Kesselring had poor air reconnaissance assets and abysmal intelligence, but he was able to stymie Allied offensives because they were highly predictable. 74 Understanding and cultural knowledge must be recognized ultimately as contingent and a spare resource that must be wisely husbanded and used in an appropriate manner rather than an end simply of itself.

There is also the problem of Design’s exact place within the military framework. Major Martin notes that the process seems to have more in common with elements of Mission Analysis. 75 Kelly and Brennan also warn that new emerging frameworks of operational art, by encompassing more and more of strategy, threaten to become autarkic and reinforce problems in strategy making. The danger in building up Design as a process is that it could enforce the operational autarky present in building a preserve where jargon-challenged civilians cannot participate in the discourse that Design advocates supposedly prize. Such a result would only enforce the tendency, observed by Gentile and others, of a “strategy of tactics” in America’s new wars.

The larger problem for campaign design is perhaps more foundational. In the comments to Burke’s original post on campaign design in Afghanistan, many participants made valuable

---

74 Vego, p. IX-105.
75 Martin, “Is Design the Right Word?”
points about how the most useful campaign design would not work if not harmonized with a larger strategic aim. So how would a better strategy and linkage of ends-ways-means be created? Perhaps the problem is definitional. “Operational art,” “grand tactics,” “minor tactics,” and other ideas have always presented a definitional problem for strategic thinkers due to their amorphous nature. As such, strategic thinkers are split between the idea of a straightforward operational level as a middle level between tactics and strategy or operational art as a connective tissue that helps translate strategic goals into tactical events. Kelly and Brennan’s monograph, for example, explicitly critiques the idea of an autarkic “operational level” and sees it as an element of strategy proper. They argue that the idea of an operational level often divorces military thought from its all-important political context into a pristine realm of military tradecraft.\(^76\)

Kelly and Brennan make excellent points. It is a mistake to necessarily view levels distinguished necessarily by hierarchal elements of command, as each overlaps. For example, modern information systems and intelligence, reconnaissance and surveillance (ISR) assets have given strategic-level leaders the opportunity to direct battle at the tactical level. What we understand as levels of war flow into each other in a nonlinear fashion. As such, the dividing line between campaigns and strategy is extremely hard to draw. Though planned by military officers, they often encompass larger strategic concerns and thus evolve through discourse with civilian politicians who ultimately set their objectives.

In James M. McPherson’s recent *Tried by War: Abraham Lincoln as Commander-in-Chief*, the noted Civil War historian makes a convincing case for Lincoln as an effective (though flawed) strategist. McPherson argues that Lincoln, though perhaps ignorant of the ideas of Carl von Clausewitz, grasped that the Confederacy’s center of gravity was its armed forces deployed in Virginia. Unlike his generals, who feared to break the Jominian orthodoxy of operating under interior lines, Lincoln grasped that concentrating forces in time with multiple assaults in different places would stretch Confederate forces to their breaking point. To execute this plan, Lincoln had to balance political considerations originating from domestic politics such as his own base of political support with more military-strategic considerations such as the best means to strike the aforementioned Confederate COG.\(^77\)

Lincoln simultaneously directed the war’s policy (the unification of the United States through military force), and its military strategy and campaigns. While the Civil War was admittedly not as expansive of a war as European conflicts that simultaneously occurred (hence the lack of attention it by European military thinkers who looked down on American backwardness), the supreme element of politics and Lincoln’s role proves Kelly and Brennan’s point that campaigns should be properly considered an aspect of strategy rather than something that exists purely in a pristine and autarkic military sphere. More recently, the major operation nicknamed “The Surge” was an intensely political (and hotly debated) military operation that touched on many aspects of both domestic political and technical military elements.\(^78\)

\(^{76}\) Kelly and Brennan, p. v.


\(^{78}\) Kelly and Brennan both make these points with verve.
It would seem that such elements of the military-political relationship would be old hat to those familiar with the Clausewitizian dictum that “war is politics by other means.” But the phrase “politics” in the sentence is not what is popularly understood. Historian Christopher Bassford, in responding to an erroneous attack on Clausewitz, notes that Clausewitz’s meaning is that that war is an expression of “politics,” understood here as not necessarily a rational state design but the result of how power is distributed in a given society. In writing this, Bassford argues, Clausewitz is not saying that “politics changes its essential nature when it metamorphoses into war.” Rather, “war remains politics in all its complexity, with the added element of violence.” 79

That is why we will, as Kelly and Brennan do, consider campaign planning as part of the term “strategy” and discuss it within the context of strategy, as the original meaning of the term strategy encompassed both the movement of troops in the theater of operations and larger political-military concerns. JP 5-0 Joint Operation Planning defines operational art as “the application of creative imagination by commanders and their staffs...to design strategies, campaigns, and major operations and organize and employ military forces.” 80 It is impossible to consider strategy and campaign planning as separate realms because the two overlap so substantially.

The focus on campaign design is welcome. But it ultimately addresses only one part of a rather complex problem. In order to implement strategic objectives it is not enough to merely visualize the problem more creatively. Rather, the operational design needs to be more firmly linked to the politics that determine the war’s aim. This will be achieved not through a more judicious system of planning but a real strategic review of the real “whole of government” relationships that constitute American military, law enforcement, and foreign relations planning and execution organs and relationships. Such a review is urgently necessary.

Conclusion

A prudent combination of training, organizational effectiveness, strategic guidance, and doctrinal mechanisms such as the MDMP and the Joint Operations Planning Process (JOPP), and proper leadership has been the combination seen in the American context in successful elements of strategy. Design works best as a complementary method to MDMP frameworks within the context of strategy in the planning of campaigns that focuses on the construction and framing of the operational idea. It has important limits in the tactical realm that are inherent in the vague language employed and the difference between it and typical tactical methodologies. It should recognize, as the CACD does, that planning cannot overcome uncertainty but only manage it.

The desire to focus more on the campaign design phases suggests that more foundational strategic problems are at work. As Kelly and Brennan repeatedly argue, we can immensely improve our strategy-making if we stop viewing the campaign as an exclusively military preserve and emphasize more the discourse and direction between civilian and military policymakers. Implementing a “whole of government” approach necessitates a more sensible

80 See FM 5-0 Joint Operation Planning, p. III-19.
conversation between lower and higher echelons, military, civilian, and extra-governmental authorities. Campaigns must be integrated back into the framework of strategy.

Adam Elkus is an analyst specializing in foreign policy and security. He is currently Associate Editor at Red Team Journal. His articles have been published in West Point CTC Sentinel, Small Wars Journal, and other publications. He blogs at Rethinking Security and The Huffington Post. He is currently a contributor to the Center for Threat Awareness’ ThreatsWatch project.

Captain Crispin Burke is a UH-60 helicopter pilot with assignments in the 82nd Airborne Division during Hurricane Katrina, Joint Task Force-Bravo in Honduras, and most recently, the 10th Mountain Division in Iraq. He writes for Small Wars Journal and under the name “Starbuck” at his blog, Wings Over Iraq.