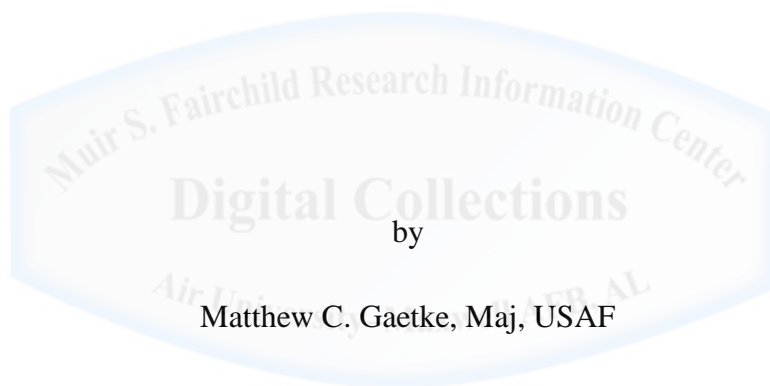AIR COMMAND AND STAFF COLLEGE

AIR UNIVERSITY

THE STRATEGIC DESIGN INQUIRY

A FORMAL METHODOLOGY FOR APPROACHING, DESIGNING,

INTEGRATING, AND ARTICULATING NATIONAL STRATEGY

by

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A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

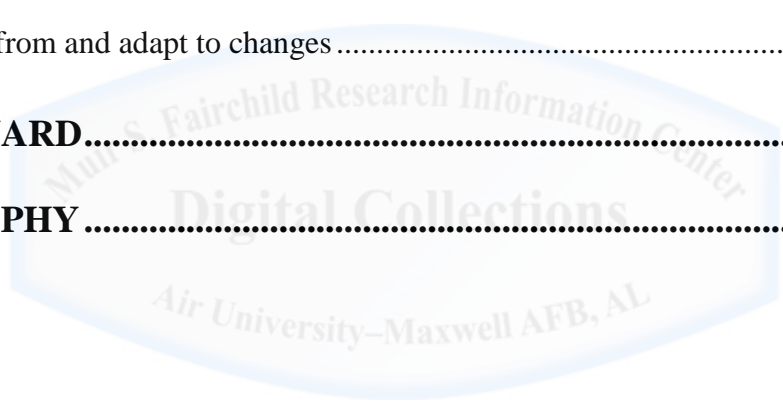Advisor: Dr. Jeffrey M. Reilly

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April 2014

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ABSTRACT

Vision is the single greatest enabler of strategic success. Forming a vision for national strategy requires accumulating the perspectives of experts from across the government. Diversity, however, means these strategists bring different approaches—even different languages—to strategic discussions. While recent efforts attempt to maximize integration at lower levels, strategic integration requires aligning the way strategists frame strategic problems—a framework of strategic design. Currently, there is no formal methodology for national strategic design. This paper proposes such a framework, a strategic design inquiry (SDI), that orders analysis of a strategic problem and provides a common language for determining and communicating what strategists wish to accomplish.

SDI begins by forming a deep understanding of the situation. Analyzing the actors and the sources of their strength reveals an approach to influencing the situation, gaining advantages at identifiable inflection points. Throughout, strategists identify structural hypotheses that govern their understanding of the situation. They envision different future scenarios, identifying criteria against which to assess the strategy and test hypotheses. SDI articulates strategy with a cognitive map, aligning planning efforts throughout the government. Even after strategy implementation, SDI calls for continuing, iterative learning and adapting, in pursuit of clearer vision and better strategy.

Introduction

Vision is the single greatest enabler of strategic success. The complexity of the modern strategic landscape, however, obscures this clarity. The paradigm of Westphalian states, pitted against each other in an anarchic struggle to maximize security, all acting according to Western notions of predictability and rationality, is crumbling. Increasingly, non-state, sub-state, and business entities influence international relations, aided by diminishing barriers to communication through increasing access to the information. These changes build on the fractured, multi-polar power structure that emerged as the Cold War ended, making the strategic environment more complex and making strategic options less clear. The modern world calls for strategies that maximize the integration of all instruments of power (IOPs): diplomacy, information, economics, and military. While several recent efforts attempt to maximize this integration at lower, tactical levels, true integration requires aligning the way the departments and agencies frame strategic problems—a framework of strategic design is necessary. Design systematically seeks to understand the environment and then define the problem, and works in complement with planning processes that flesh out details and integrate lower-level activities.

A strategic design inquiry (SDI) embraces the complexity of the strategic environment, building on identified structural hypotheses to create a situational understanding and a view of the desired future: the strategic aim. It identifies the actors and the sources of their power, the centers of gravity (COGs), which the strategy must influence and the strategic inflection points linking intermediate objectives that do so. These inflection points combine to form strategic efforts, which may branch based on anticipated nonlinearities, both anticipated crises and potential emergent opportunities. Finally, SDI includes positive tests of the foundational structural hypotheses to determine the validity of the design before total commitment to it.

Capturing this analysis on a cognitive map allows strategists to articulate a design to government agencies and departments. The analytic process also anticipates and illuminates potential decisions national leaders will have to make, placing them within the larger framework of the strategy. Taken together, SDI provides a common language and analytical framework for approaching, designing, integrating, and articulating strategy in a complex world.

Increasing Complexity Requires Adaptive Solutions

Since the end of the Cold War, the strategic issues confronting the United States have demanded integrated application of all IOPs in nuanced ways to influence disparate, diverse actors with diverging interests. American efforts have often fallen short, with incomplete coordination between government agencies leading to ad hoc and incomplete integration of IOPs—in the best case. In the worst case, agencies unintentionally undermine each other's efforts. American interventions in Bosnia, Somalia, and Haiti all illustrate this trend. Investigation of the 9/11 attacks turned up similar failures, with government agencies and departments working to cross purposes.[1] The aftermath of Hurricane Katrina demonstrates a failure of government agencies to work in concert, even with 72 hours of warning and an "adversary" that was neither thinking nor reacting. In Afghanistan, the enemy did both.

Shortly after President Obama took office, he initiated a review of American strategy in Afghanistan. What follows points to the problem: current descriptions of designing strategy lack structure. Despite Robert Gates reluctance to turn immediately to troop numbers, and the president's desire for "a choice of real options," discussions quickly turned to resources instead of strategy.[2] Eight meetings into the policy review, military officers presented four strategic options to the president. The first called for a surge of 85,000 American soldiers, presented as impossible due to inadequate resources. The second called for 40,000 additional soldiers to

increase protection of the Afghan population. Generals McChrystal and Petraeus supported this option. The third option held back 5,000 to 10,000 soldiers from option two. The fourth added only 20,000 troops, which the military assessed as being too few to accomplish the mission (as they understood it). Essentially, the only viable options presented were the second and third, themselves almost indistinguishable.[3]

More importantly, these were not strategic options. At the most basic level, strategic options would include efforts from all IOPs, rather than only different resource levels for one instrument. The military began with an assumption of what the strategy should be—a population-centric counterinsurgency (COIN). One of the participants in the review, Karl Eikenberry, wrote later that the strategy, in retrospect, depended on assumptions that "were spectacularly incorrect" in hindsight.[4] He concludes by advising that before another attempt at COIN, "Americans should insist on a rigorous and transparent debate about its ends and its means."[5] Ironically, this kind of debate was exactly what President Obama sought in 2009.[6] Unfortunately, the debate failed to apply an orderly approach to framing and then approaching the problem.

In part, the lack of framework stems from tragically simplistic models for making strategy. To begin with, a typical strategy-making model involves (1) determining interests, (2) translating them into objectives, and (3) deciding how to accomplish these objectives.[7] Strategists then simply assign roles and missions to the various agencies and departments responsible for wielding the IOPs, providing them clear end states to illuminate what is to be accomplished. This model is simple, although one remembers that "the simplest thing is difficult."[8]

Strategy, especially in an increasingly complex world, is not simple. Colin Gray offers five reasons why this is so: strategy bridges both policy and combat; it is "perilously complex;"

training in strategy is itself difficult; given the breadth of interests of strategy, "the maximum number of things can go wrong;" and it remains a struggle against "the will, skill, and means of an intelligent and malevolent enemy."[9] On the other hand, while the making of strategy will require a more complex model than "formulate objectives, then determine ways and means," the very issues that make strategy difficult provide pathways to doing it better, even if never perfectly. A new model must embrace the complexity, anticipate those things that might go wrong, and internalize the perspectives and interests of enemies and all other strategic actors. SDI takes this approach.

SDI reasons forward, from an understanding of the current situation to a more complete realization of a strategist's interests. In contrast to design, "planning" depends on reasoning backward from a desired end state, making it wholly dependent on an understanding of causality in the environment. SDI is a framework that allows strategists to generate those objectives which enable agency and department planning. It provides the structure that allows strategists to connect interests to objectives, based on an understanding of the environment. By providing these objectives and end states, but articulated in the context of a broader strategy, SDI allows departments and agencies to better integrate and synchronize the IOPs.

Framework for the strategic design inquiry

Strategists can initiate SDI in response to a crisis or deliberately, to shape a standing strategy. The inquiry is recursive. A regional SDI can nest into a broader, global SDI. Additionally, strategists facing an emerging crisis can nest their design into a standing strategy, borrowing from an existing understanding of the strategic situation. SDI is also iterative; when information appears that reveal new insights into any element, SDI begins again, incorporating

the new understanding. Finally, it is policy-agnostic, and can reflect changes in policy, capturing the effects of the changes and showing what the actual impact will be.

SDI imposes a provisional, logical structure to simplify a complex situation. This structure supports the strategist's intervention in an attempt to make the situation "better."[10] Specifically, while not limiting creative or critical thought, SDI proceeds along a general logical path (see Figure 1). Progress is measured by the improvement in understanding of the situation
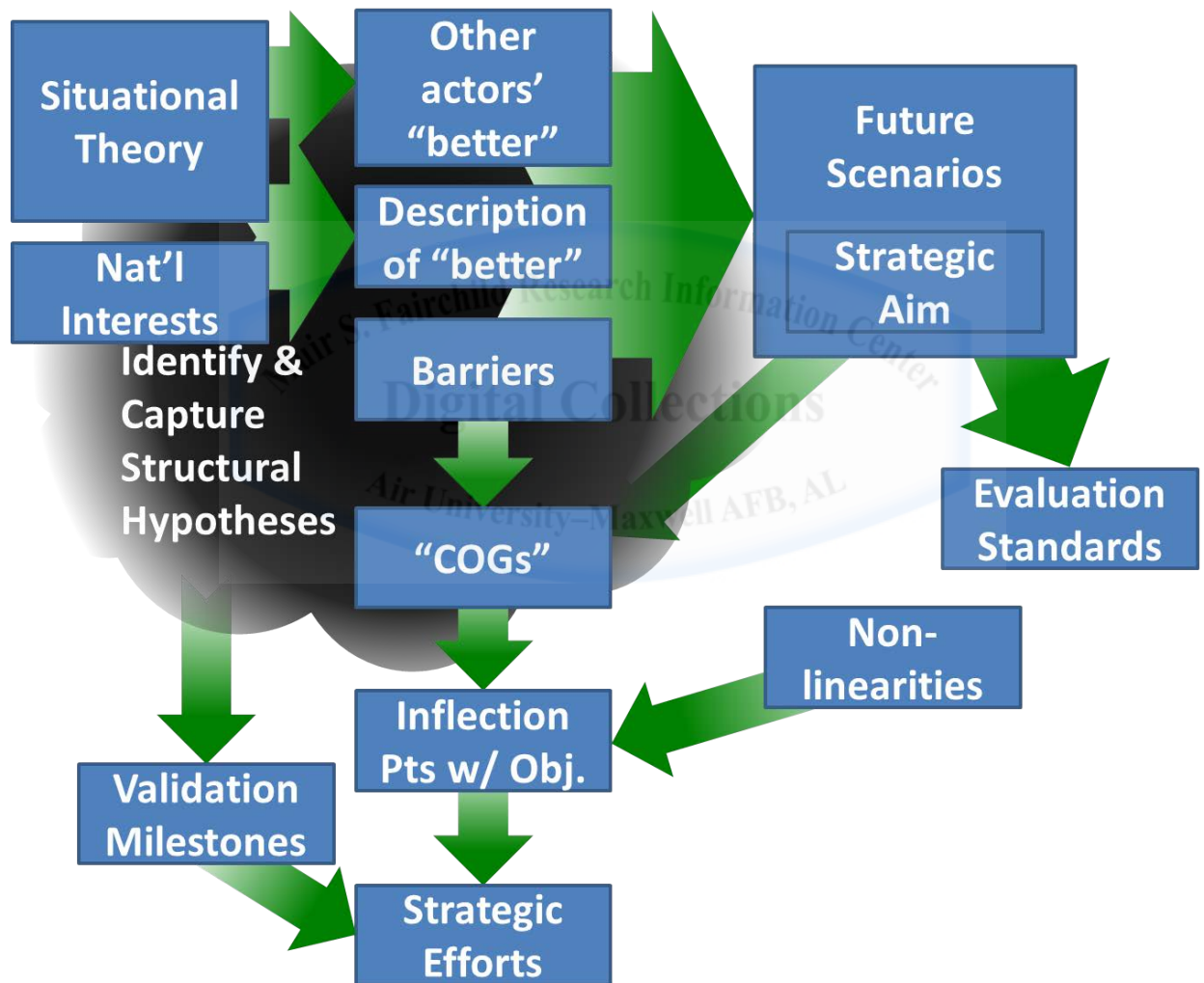

Figure 1: SDI Process

and the problem, and the quality of the solution, not by movement through the stages. Viewed in

this light, revisiting a previous step is "progress," since it indicates a better understanding of the situation.

The goal of SDI is to align actions from across all IOPs toward a strategic aim. The strategic aim is a realistic assessment of both the desired condition of the situation, and an understanding of how that improved condition might emerge, with a time horizon of roughly 10 years. SDI also identifies potential nonlinearities—crises or emerging opportunities—that strategists can leverage toward the strategic aim. Strategists must re-accomplished SDI at least every 4-5 years to incorporate changes in the environment (whether a result of strategic actions, the actions of others, or outside forces), improved understanding of the environment, and, most importantly, changes in the understanding of the problem itself.

Understanding Complex Situations

SDI could start in either of two places: determining national interests or formulating a working theory to explain the situation within the strategic environment. Both of these are primary, foundational investigations of SDI[11] and are independent: changing national interests (e.g. after a national election) do not change the logic of the situation. A change in either the situation itself, or the strategist's understanding of it, should not affect core interests.

Theory of the situation. "Understanding the environment is the initial step and foundational basis for the entire design process."[12] While interest formulation can precede a specific SDI, forming a theory of the situation—at least reexamining a previous theory—must occur each time. In order to make the situation better, the strategist must understand it. With the vast complexity of strategic situations, SDI tries to build a logical approximation of the situation, trying to understand it as well as possible, but approximating where required due to lack of information, understanding, or time. This logical framework explains how the situation evolved,

describes the actors within in the situation, and anticipates the reactions of these actors to the strategist's actions.

Strategists will impose such a framework on an unfamiliar situation subconsciously,[13] simplifying or generalizing to cover gaps in knowledge. This framework will be based on experience, culture, and observations. Strategists cannot approach problems "with a completely open, blank, mind on strategic ideas, but rather with values, attitudes, and preferences through which they filter new data, and in terms of which they judge among alternative courses of action."[14] Nevertheless, strategists must challenge the assumptions and biases they bring to SDI. Design is best performed by a small, diverse group of experts. If these experts initially agree on the logic of the situation, the viewpoints are probably insufficiently diverse. In studies during the 1960s and 1970s, the routine interaction of "disparate experts" within "decision seminars" analyzing social problems "opened up a new range of analytic and policy possibilities,"[15] and this approach continues to provide the best way to challenge preconceived notions.

Creating an actor map of the interested parties is one element of forming a situational theory. Linkages between actors can show influence or relationships between them. As part of the situational theory, this actor map should include both enemy and perceived friendly or neutral states. It should illuminate the current understanding of the environment, not desired changes to the environment. Strategists must analyze each actor to determine its interests, and then, from its perspective, describe the strategic situation with those interests more fully realized. The tensions between the strategic visions of different actors illustrate potential seams to mend or exploit.

History also contributes to a strategist's situational understanding. It shapes actors' perceptions and illuminates their potential reactions to proposed strategic efforts. Additionally,

military doctrine suggests analyzing political, military, economic, social, information, and infrastructure elements.[16] A goal in this analysis is identifying the trends and the underlying forces driving those trends: known quantities that will shape the future.[17] These trends may be driven by other actors with interests in the situation, social forces, demographics, scarcity of resources, etc. The National Intelligence Council identified four "mega-trends" likely to shape world events by 2030: individual empowerment; diffusions of power; demographic patterns; and shortages of food, water, and energy.[18] While these trends are relatively certain, the local reactions to them may be more variable. Additionally, many forces will influence the future with less predictable results, or to a less predictable degree. SDI maintains a list of these factors as well.

Structural Hypotheses. Throughout SDI, issues emerge that collaboration cannot resolve. These issues will hinge on unknowable facts or incomprehensibly complex interactions. Since strategists cannot definitively determine these issues, they must make an assumption to resolve these debates. Typically, military plans enumerate assumptions on which the plan depends which are assumed to be true absent proof, although "commanders and staffs should anticipate changes to the plan that may become necessary should an assumption prove to be incorrect."[19] Assumptions made during SDI, on the other hand, inherently select one explanation of a complex environment at the expense of another, perhaps equally likely explanation. Absent fact or analysis to decide definitively, selecting one framework should be considered advancing a hypothesis rather than making an assumption. An assumption is an expedient for planning. A hypothesis must be tested.

SDI maintains a list of these hypotheses governing the structure of the evolving situational theory. Continuing cycles of analysis refine the situational theory, continually

improving it to account for new or evolving information. Since hidden assumptions always lurk in a strategist's thinking, "it is always useful to expose that lattice-work to light by making all parts of it explicit, and exposing it to rigorous examination from multiple perspectives…It is far easier to test and revise an explicit than an implicit logic."[20] When circumstances evolve differently than expected, this list of hypotheses provides a starting point to reevaluate the understanding of the environment.

While on a much smaller scale, the strategist's evolving understanding of the situation resembles what Thomas Kuhn calls a "paradigm." Scientists operate under a paradigm when the major problems in their field appear solved, allowing them to work out smaller facets of theory. This "normal" science is akin to planning. Scientists can refine details, but do not question the fundamental logic of their understanding. When this certainty is challenged by new data or more elegant or complete theories, the community enters a crisis until a new, revolutionary paradigm emerges to general consensus. Occasionally, it takes the death of holdouts to completely resolve the crisis.[21] The intent in SDI of recording structural hypotheses is making strategists more likely to recognize an emerging crisis and reject a failed paradigm before it leads to strategic catastrophe.

National interests. National interests should change slowly,[22] and may well predate a crisis. The language of these interests will likely be broad,[23] the path to reaching and maintaining them will be unclear, they will conflict in many situations, and they are ungrounded in the realities of any particular situation. As such, interests guide strategy but do not form strategy. For example, the 2010 *National Security Strategy* lists four "enduring" American national interests: security, prosperity, values, and international order.[24] In any region or situation, these interests shape a vector toward desired change. Since vectors include both magnitude and direction,

national interests provide the direction. Of course, national interests are not of equal importance. One categorization divides survival, vital, important, and peripheral interests.[25] As political leaders and strategists formulate interests, by lumping them into these categories they enable prioritization of effort and resolution of disputes when interests collide or contradict. An expression of national interests, while necessarily imperfect and incomplete, provides the starting point for determining how to make a situation better.

Description of "better." The next step of SDI builds on the foundation of national interests and the situational theory: framing a description of the situation with national interests more fully realized. This description may be unrealistically optimistic within the foreseeable future. This step may highlight barriers to progress but should avoid assessing the degree of their impact. Instead, the goal is to capture as many elements of the problem—as many areas for improvement—as possible given the current understanding of the environment. The description of "better" is a list of statements describing how the interests could be more fully realized in the situation. As interests can sometimes conflict, so can statements describing a better situation. Completing this description allows strategists to clarify the interest hierarchy.

Barriers and Strategic Aim. With this desired description complete, SDI next evaluates the barriers to achieving the "better" situation. Some of these barriers became evident while completing the description of "better." For example, if a description of a "better" Middle East included democratization in all regional states, a several barriers become apparent. In the case of Iran, the entrenched interests of both the politico-religious leadership and the Republican Guard stand in the way of democratization. In Afghanistan, multiple languages, lack of national identity, and poor primary education bar this interest. Barriers also include the tension between other actors' interests in the situation.

The strategic aim is both a modification of the description of "better" tempered by barriers and time, and a narrative showing the emerging improvement. SDI looks forward roughly 10 years, analyzing the magnitude of change possible in that time. This time horizon is long enough to allow meaningful change but short enough to retain some degree of predictability. As a comparison, in economics, where theories of causation are further developed than in international relations, recent upheavals have nevertheless convinced forecasters to shorten horizons. Morgan Stanley's Ruchir Sharma advocates a three to five year horizon, "the only useful time frame for political leaders, businesspeople, investors, or anyone else with a stake in current events."[26] Ten years makes sense in the strategic context since the fidelity of prediction is less than that required in economic forecasts. The standard for certainty is lower in strategy.

Analyzing the impact of barriers leads shapes the narrative that traces the evolution of the current situation to the strategic aim, based on the foundational understanding of the situation. Turning the strategic aim into a story illuminates how other actors perceive the shift, helps strategists deal with complexity, and gives meaning to the events necessary to bring it about.[27] This narrative describes a plausible—reasonably possible but not necessarily likely—sequence of events leading to the strategic aim. It depends on the driving forces identified earlier. When fashioning the strategic aim, SDI assesses uncertain driving forces in the way most beneficial to the strategist. Forming the strategic aim is consciously optimistic.

Like all of SDI, this step is iterative. As the narrative takes shape, certain barriers will seem more or less imposing, and new barriers will emerge. These realizations reshape the strategic aim and the narrative that shows its emergence, as it plausibly overcomes or evades

each barrier. This narrative describes the most positive future scenario, given the understanding of the situation.

This narrative ends in a description: the state of the situation after a reasonable time, with interests more fully realized, resisted by barriers and the interests of others. This description, however, is not an "end state." From the strategic perspective there is no "end," there is only movement in a direction toward "better." The strategic aim, then, is a point along the arc from the present conditions toward the "better" situation, a point realistically shaped by the barriers (and therefore achievable), improved but not perfect. As such, the strategic aim will never be reached. Instead, as the situation evolves during the execution of the strategy, it will change in ways unforeseen during the design. The strategist must revisit SDI well before the time horizon projected in the aim. Rather than an objective to be achieved, the strategic aim remains forever in the future, constantly adjusted as the situation changes and the strategist's understanding of it improves.

Future Scenarios and Evaluation Standards. Having completed the most positive narrative, SDI also considers two or three less desirable future scenarios. These alternative scenarios provide multiple lenses through which to view future events. Like the strategic aim, SDI expresses these alternate scenarios as narratives. Building on the trends identified earlier, actors' alternate responses to the tensions in the system may precipitate differing outcomes. Furthermore, structural hypotheses may prove invalid, dramatically changing the course of events. Finally, the trends themselves and the driving forces behind them provide another source of variability. SDI selects those forces that will have maximum impact and that are surrounded by the most uncertainty, and looks at the potential outcomes based on the differing impact of those trends.[28]

Generally, the strategist should consider at least a very negative scenario and a middling scenario, either one just acceptable or just unacceptable to the strategist. Adding a fourth scenario is useful if the first three fail to capture broad uncertainties in the situation; more than four will cause more confusion than added benefit.[29] RAND experimented with computer-generated scenarios that more completely cover the possible outcomes, "conceiving the full 'possibility space.'"[30] While this type of system helps expand strategists' conceptions of possible outcomes, it fails to provide the narrative of their emergence. Narratives illuminate the type of evidence that could indicate whether trends are changing and may prove or disprove structural hypotheses. Describing how the hypotheses broke down indicates ways to test them.

Future scenarios also inform evaluation standards to assess a strategy's effectiveness or at least show whether the situation is trending in the intended direction. Standards may be quantitative, allowing graphical indications of progress or regression (Figure 2) or qualitative. As the narrative unfolds in each scenario, certain events facilitate its evolution. Some of these events
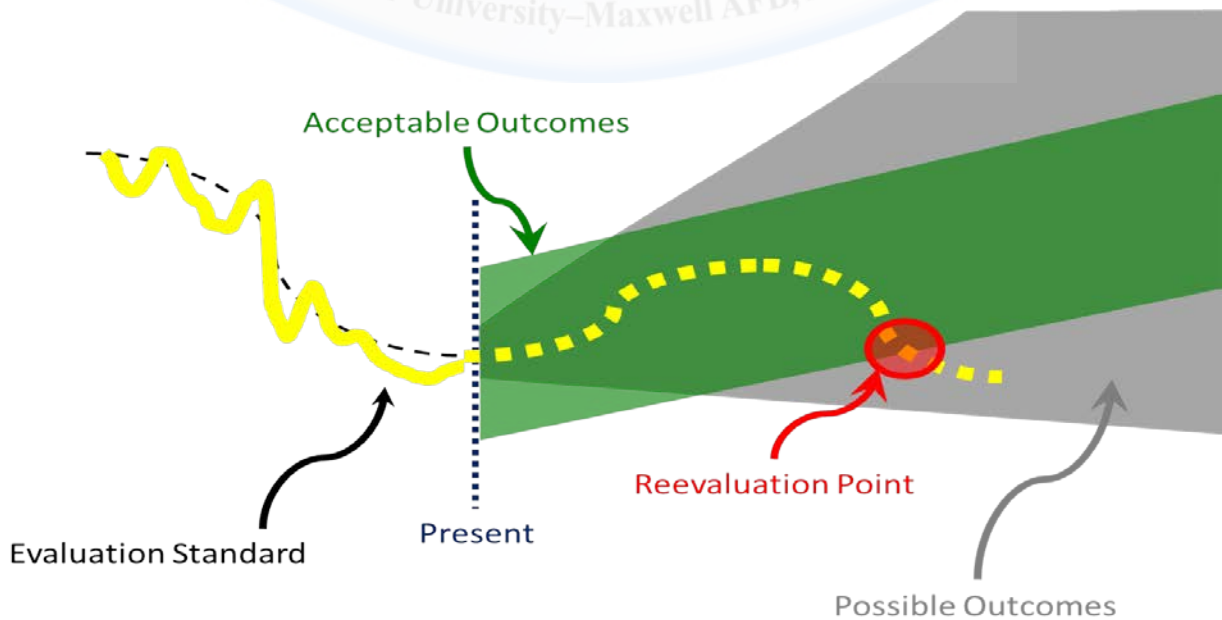

Figure 2: Evaluation standard tolerance

will occur only in one scenario, and can therefore indicate which scenario may be emerging.[31] Lists of these events are also evaluation standards, since their occurrence indicates the situation is moving in the direction of one of the scenarios.

Finally, strategists must determine the tolerance acceptable for each evaluation standard. Recording the acceptable tolerance can force a reevaluation of strategy based on them before irreparable damage occurs. The amount of tolerance depends on the level of interest involved; vital interests demand tighter tolerance than peripheral.

Determine logic of improving the situation

COGs. Based on the analysis performed so far, certain actors stand out that play particularly supportive or disruptive roles in the situation. Each of these actors, and the barriers impeding progress, derives power from a COG. Strange and Iron say "to reach a lasting settlement…one must undermine enemy strategic…centers of gravity."[32] Similarly, friendly COGs must be preserved and neutral COGs swayed toward national interests. SDI identifies COGs for each actor, and then conducts a critical factor analysis of these COGs.[33] Strategy will not influence all identified COGs. Specifying a COG provides a powerful statement, focusing planning on that COG and its vulnerabilities. Strategists must ensure that specified COGs are not only a source of power, but are those they wish to influence.

Inflection Points and Validation Milestones. COG analysis will identify certain critical vulnerabilities that, once leveraged, return disproportionate advantage. These particular vulnerabilities, inflection points, represent intermediate conditions where the power of an adversary's COG is significantly diminished or that of a friendly COG significantly enhanced. Inflection points articulate more specifically how strategists intend to influence COGs.

Additionally, the eventual strategy must take active steps to test and resolve the "underlying scaffold"[34] of structural hypotheses identified throughout SDI. If possible, each hypothesis should be tested by a specific strategic action. These validation milestones should invoke small actions, i.e. either affect a small portion of the situation or have a far-reaching but incremental anticipated result. This trial-and-error approach on a survivable scale borrows from business techniques to solving complex problems.[35] The incremental improvement possible with a small experiment is offset by the significant advantage of proving a structural hypothesis. If disproven, the cost would be small and allow a strategy reevaluation before catastrophic failure. Had the U. S. Afghanistan strategy systematically tested the assumptions Eikenberry identified, perhaps the flaws may have come to light sooner, and at less cost.

Strategic Efforts. Next, SDI groups inflection points into logically related strategic efforts. A tendency might be to group inflection points based on the IOP primarily responsible for accomplishing them. An inflection point, however, should stand independently from how it is accomplished. In fact, strategic options nested under a strategic design, would comprise different combinations of IOPs used to accomplish the same inflection points. Strategic efforts, since they are made up of inflection points, are also
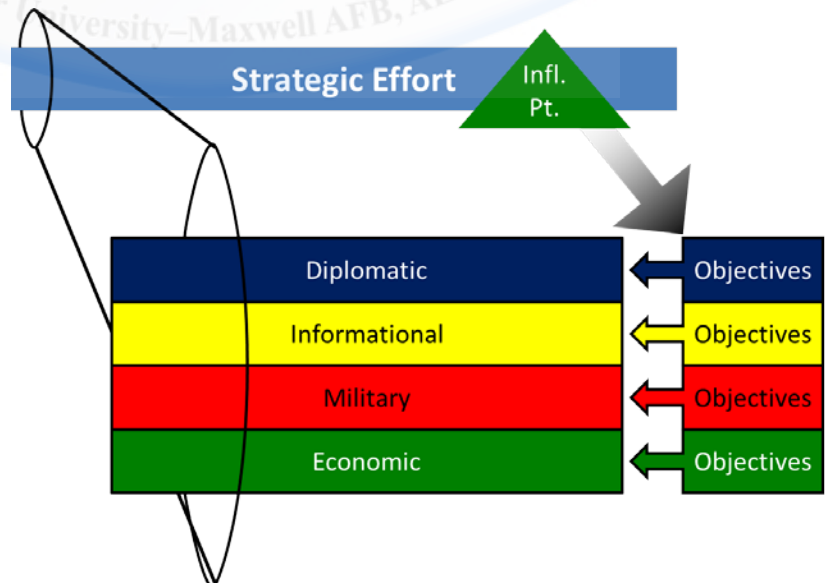

Figure 3: Strategic efforts across IOPs

supported by all IOPS. A cross-section of a strategic effort would include efforts from all

departments and agencies (see Figure 3).

Instead, strategic efforts should group inflection points based on their nature. For

example, inflection points related to one broad national interest—perhaps basing and access—

could group into a single strategic effort. Finally, SDI orders inflection points to build on one

another within a strategic effort to more fully realize national interests.

Nonlinearities. Unlike the strategic efforts described so far, strategies must also flexibly

respond to crises or emerging opportunities. These crises and opportunities are nonlinearities in

the arc of strategy. Based on the situational theory, SDI predicts some of these potential

nonlinearities. By brainstorming potential nonlinearities during SDI, strategists can anticipate

how to profit from both opportunities and crises to advance the strategic position.

Nonlinearities will likely propel the strategy off of an existing strategic effort onto a

parallel one, and SDI considers the path back toward the strategic aim. The new effort may

reconnect with the previous effort, or cause the strategist to abandon the old effort and proceed

more directly toward the strategic aim. In either case, the nonlinearity should expose inflection

points previously unavailable. Crises, by changing the strategic arc, offer the strategist

opportunities to short-circuit strategic efforts, influencing COGs more directly. For example, a

strategic effort may attempt to isolate a hostile regime with the aim of encouraging a more

democratic government. If the regime acts aggressively, however, a military response would

invoke new inflection points, along a new strategic effort, of ensuring access and forcible

removal of the regime. This new strategic effort would reconnect to an inflection point of a

democratically elected government, also part of the previous effort. Response to this potential

nonlinearity, and how it fits into the strategy writ large, informs military contingency planning.

Cognitive map of strategy. Plotting strategic efforts toward the strategic aim, punctuated by inflection points, provides a cognitive map of the strategic design. In the example (Figure 4) the strategic efforts do not reach the aim since the strategy will be reevaluated beforehand. The nonlinearities are represented as departures from existing strategic efforts that then reconnect to the original effort or proceed along a new effort toward the strategic aim. Potential strategic efforts in response to nonlinearities contain their own inflection points that were previously unavailable or unnecessary.

Objectives and End States. Each inflection point also defines objectives and end states for the IOPs, integrating their effects. Since inflection points inform intermediate descriptions of the situation, they each provide an "end state"—what the military would call a "national strategic end state"—of that portion of a strategic effort. These objectives and end states guide government agencies' planning. As one IOP, the military provides an illustration of how this
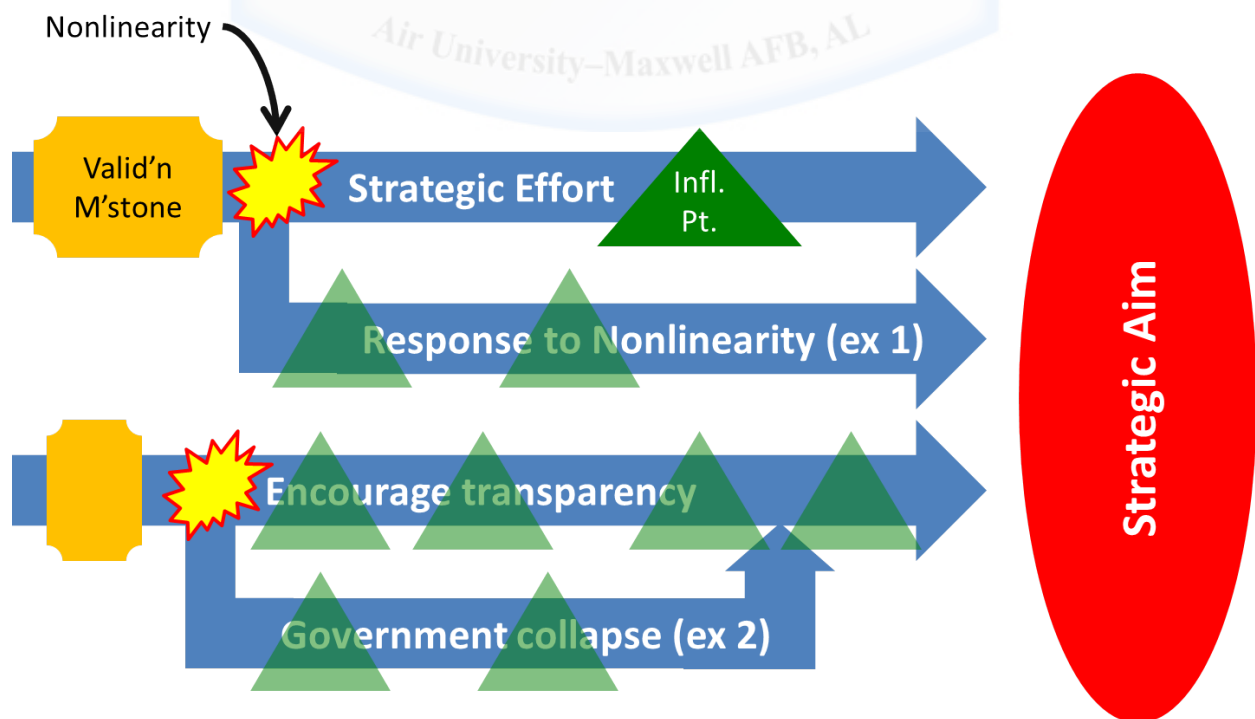

Figure 4: Example cognitive map

articulation of a strategic design can inform department planning. For the military, national

strategic objectives and end states would flow directly into the Secretary of Defense's Guidance

for the Employment of the Force (GEF), providing the military "implementable direction for

operational activities."[36] Strategic efforts begun in peacetime inform a Combatant Commander's

Theater Campaign Plan, focused on "ongoing operations, military engagement, security

cooperation, deterrence, and other shaping or preventative activities."[37] Potential nonlinearities,

especially possible crises, drive contingency planning. With SDI, these contingencies no longer

exist in isolation. Instead, the cognitive map shows how each contingency should further

progress toward the strategic aim. Military planners see how their actions shape the strategy to

follow and understand how the "end state" of a military operation may only be the start of a

longer strategic effort, shaped by the conditions achieved during military operations.

Strategic efforts do not end with the "end states" informed by inflection points. Rather,

the end states are merely intermediate conditions—ending short-term activities—of longer-term

efforts. For example, an inflection point may provide a strategic end state for a military response

to aggressive action. This end state describes the situation with major military operations

complete, but the strategic effort goes on. Military forces deployed when the military "end state"

is reached may well have a continuing job to do in reaching the next inflection point along the

strategic effort. End points facilitate planning lower-level efforts, but the strategy does not end.

Objectives and end states enable departments and agencies to begin planning their

portions of the overall strategy in an integrated manner. Their planning efforts can then proceed

in parallel, without duplicating effort. While not part of SDI, strategists may generate and

compare strategic options within the framework of the strategic design. These options would

achieve the inflection points using differing combinations of IOPs. This process resembles other

"planning" processes: selecting among options of achieving known objectives. As such, this process lies outside SDI, although if it leads to a better understanding of the situation, it could initiate another iteration of SDI, leading to a still better strategic design.

Learn from and adapt to changes

A key benefit of SDI is the opportunity to anticipate key strategic decisions[38] and place them in a larger context. These decisions provide pre-planned opportunities for national leaders to adapt to changing circumstances in the situation. Forming the future narratives during SDI provides a window into the kinds of decisions national leaders will need to make to respond to actions by others or take advantage of fleeting opportunities. The tolerance of evaluation standards provides decision points of reevaluating the entire strategy. Additionally, nonlinearities include the embedded decision of when to transition to the divergent strategic effort. Determining the specific indications that could herald the nonlinearity supports national leaders in assessing the approaching decision. Seeing how the decision fits into the larger strategy demonstrates the urgency associated, preventing strategic paralysis.

Finally, SDI continues even as strategists turn to determining how to accomplish the design. In fact, it continues even after the strategy is finalized and implemented. Further analysis will unlock a greater variety of opinions and data that will inform continued design efforts. Changed understanding of the situation will require revisiting previous SDI steps. The iterative process continues even as the strategy is implemented, as actions and responses validate or invalidate structural hypotheses. Disproof of these hypotheses drives revised theories of the situation, another iteration of SDI, and eventually to better strategy.

Way Forward

SDI provides a logical framework within which strategists can properly frame the problems they wish to solve. A strategic design process at the National Security Council would facilitate integrating and coordinating the IOPs. Approaching a strategic situation, strategists will impose a logical framework providing the logic for solving perceived problems. Since they inevitably bring biases and preconceptions, without a common framework guiding the discussion, strategists will talk past one another. SDI provides this framework and a common taxonomy for the design process.

Through SDI, strategists arrive at a good—and constantly improving—understanding of the situation, based on acknowledged structural hypotheses. Built on that understanding and defined national interests, strategists formulate a strategic aim, a picture of the situation after a reasonable time, improved according to the national interests, but hindered by the interests of others and situational barriers. SDI calls for a critical factor analysis of COGs of the various actors and determine critical vulnerabilities. These inform strategic inflection points, which are organized along strategic efforts. Strategists anticipate potential nonlinearities, anticipated crises and emerging opportunities, and structure responses in terms of parallel strategic efforts. Evaluation standards demonstrate progress toward the strategic aim while validation milestones align actions taken specifically to test structural hypotheses, validating both the hypotheses and the strategy built upon them. All of this helps national leaders anticipate strategic decisions.

SDI provides a framework to reason forward from a current situation, divining ways to make the situation "better," or in more accordance with national interests. SDI helps strategists articulate what they wish to accomplish before analyzing how to accomplish it. This framework provides planners responsible for wielding the IOPs a common grammar, linking their planning

objectives and end states to a broader, longer-term strategic plan. Consciously or not, strategists will perform these problem-defining steps. Better they do so consciously, using SDI to approach, design, integrate, and articulate clearer vision and better strategy.

Notes

1. *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States* (New York, NY: W. W. Norton & Company, 2004), 400-10.

2. Robert M. Gates, *Duty: Memoirs of a Secretary at War* (New York, NY: Knopf, 2014), 356-7.

3. Bob Woodward, *Obama's Wars* (New York, NY: Simon & Schuster, 2010), 272-8.

4. Karl W. Eikenberry, "Limits of Counterinsurgency Doctrine in Afghanistan," *Foreign Affairs* 92, no. 5 (September-October 2013): 61.

5. Ibid., 74.

6. Woodward, *Obama's Wars,* 161.

7. Dennis M. Drew and Donald M. Snow, *Making Strategy: An Introduction to National Security Processes and Problems* (Maxwell AFB, AL: Air University Press, 1988)*,* 13-23; and Drew and Snow, *Making Twenty-First-Century Strategy: An Introduction to Modern National Security Processes and Problems* (Maxwell AFB, AL: Air University Press, 2006)*,* 13-27.

8. Carl von Clausewitz, *On War,* ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), 119.

9. Colin S. Gray, "Why Strategy Is Difficult," *Joint Forces Quarterly* 22 (Summer 1999): 9-10.

10. Brig Gen Huba Wass de Czege, "Logic and Method of Collaborative Design," *Small Wars Journal* (12 May 2010), http://smallwarsjournal.com/jrnl/art/the-logic-and-method-of-collaborative-design.

11. "Interests serve as the foundation…for the formulation of policy" (Alan G. Stolberg, "Crafting National Interests in the 21st Century," in *U.S. Army War College Guide to National Security Issues,* vol. 2, *National Security Policy and Strategy*, 5th ed., ed. J. Boone Bartholomew, Jr. (Carlisle Barracks, PA: U.S. Army War College, 2012), 14). For the foundational nature of understanding the situation, see note 11.

12. Jeffrey M. Reilly, *Operational Design: Distilling Clarity from Complexity for Decisive Action* (Maxwell AFB, AL: Air University Press, 2012)*,* 5.

13. Brig Gen Huba Wass de Czege, to the author, e-mail, 6 Mar 2014.

14. Colin S. Gray, *Modern Strategy* (New York, NY: Oxford University Press, 1999), 28-9.

15. Garry D. Brewer, *Dealing with Complex Social Problems: The Potential of the Decision Seminar* (Santa Monica, CA: RAND Corporation, August 1972)*,* 15.

16. Joint Publication (JP) 5-0, *Joint Operation Planning*, 11 August 2011, III-9-10.

17. Peter Schwartz, *The Art of the Long View: Planning for the Future in an Uncertain World* (New York, NY: Currency Doubleday, 1996)*,* 242-3.

18. National Intelligence Council, *Global Trends 2030: Alternative Worlds* (December, 2012): ii-v, http://www.dni.gov/index.php/about/organization/national-intelligence-council-global-trends.

19. JP 5-0, IV-7-8.

20. Wass de Czege, "Logic and Method of Collaborative Design," 2.

21. Thomas S. Kuhn, *Structure of Scientific Revolutions,* 2nd ed., enlarged (Chicago, IL: University of Chicago Press, 1970).

22. Stolberg, "Crafting National Interests," 15-6.

23. Shimon Naveh, *In Pursuit of Military Excellence: The Evolution of Operational Theory* (Portland, OR: Frank Cass, 1997), 8; and Wass de Czege, "Logic and Method of Collaborative Design," 5.

24. *The National Security Strategy (NSS) of the United States of America* (Washington, DC: The White House, May, 2010): 17.

25. Stolberg, "Crafting National Interests," 18-19.

26. Ruchir Sharma, "The Ever-Emerging Markets: Why Economic Forecasts Fail," *Foreign Affairs* 91, no. 1 (January/February 2014): 56.

27. Schwartz, *Art of the Long View,* 37-43.

28. Ibid.*,* 101-17, 241-8.

29. Ibid.*,* 140.

30. Paul K. Davis, Steven C. Bankes, and Michael Egner, *Enhancing Strategic Planning with Massive Scenario Generation: Theory and Experiments* (Santa Monica, CA: RAND Corporation, 2007)*,* 2.

31. Schwartz, *Art of the Long View,* 197-201.

32. Joseph L. Strange and Richard Iron, "Center of Gravity: What Clausewitz Really Meant," *Joint Forces Quarterly* 35 (October 2004): 26.

33. Dr. Jack D. Kem, *Campaign Planning: Tools of the Trade*, 3d ed. (Fort Leavenworth, KS: U.S. Army Command and General Staff College, March 2009), 71-91 and U.S. Army War College, *Campaign Planning Handbook: Academic Year 2014* (Carlisle Barracks, PA: U.S. Army War College, 2013)*,* 37-8.

34. Brig Gen Huba Wass de Czege, "Operational Art: Continually Making Two Kinds of Choices in Harmony While Learning and Adapting," *Army* 61, no. 9 (September 2011): 56.

35. Tim Harford, *Adapt: Why Success Always Starts with Failure* (New York, NY: Farrar, Straus, and Girioux, 2011)*,* 27.

36. JP 5-0, II-3.

37. Ibid., II-4.

38. Reilly, *Operational Design,* xi.

BIBLIOGRAPHY

The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States. New York, NY: W. W. Norton & Company, 2004.

Brewer, Garry D. *Dealing with Complex Social Problems: The Potential of the Decision Seminar.* Santa Monica, CA: RAND Corporation, August 1972.

Clausewitz, Carl von. *On War.* Edited and translated by Michael Howard and Peter Paret. Princeton, NJ: Princeton University Press, 1976.

Davis, Paul K., Steven C. Bankes, and Michael Egner. *Enhancing Strategic Planning with Massive Scenario Generation: Theory and Experiments.* Santa Monica, CA: RAND Corporation, 2007.

Drew, Dennis M. and Donald M. Snow. *Making Strategy: An Introduction to National Security Processes and Problems.* Maxwell AFB, AL: Air University Press, 1988.

———. *Making Twenty-First-Century Strategy: An Introduction to Modern National Security Processes and Problems.* Maxwell AFB, AL: Air University Press, 2006.

Eikenberry, Karl W. "Limits of Counterinsurgency Doctrine in Afghanistan." *Foreign Affairs* 92, no. 5 (September-October 2013): 59-74.

Gates, Robert M. *Duty: Memoirs of a Secretary at War.* New York, NY: Knopf, 2014.

Gray, Colin S. *Modern Strategy.* New York, NY: Oxford University Press, 1999.

———. "Why Strategy Is Difficult." *Joint Forces Quarterly* 22 (Summer 1999): 6-12.

Harford, Tim. *Adapt: Why Success Always Starts with Failure.* New York, NY: Farrar, Straus, and Girioux, 2011.

Joint Publication (JP) 5-0. *Joint Operation Planning*, 11 August 2011.

Kem, Dr. Jack D. *Campaign Planning: Tools of the Trade*. 3d ed. Fort Leavenworth, KS: U.S. Army Command and General Staff College, March 2009.

Kuhn, Thomas S. *Structure of Scientific Revolutions.* 2nd ed., enlarged. Chicago, IL: University of Chicago Press, 1970.

National Intelligence Council. *Global Trends 2030: Alternative Worlds,* December 2012. http://www.dni.gov/index.php/about/organization/national-intelligence-council-global-trends (accessed 12 August 2013).

The National Security Strategy (NSS) of the United States of America. Washington, DC: The White House, May, 2010.

Naveh, Shimon. *In Pursuit of Military Excellence: The Evolution of Operational Theory.* Portland, OR: Frank Cass, 1997.

Reilly, Jeffrey M. *Operational Design: Distilling Clarity for Decisive Action.* Maxwell AFB, AL: Air University Press, 2012.

Schwartz, Peter. *The Art of the Long View: Planning for the Future in an Uncertain World.* New York, NY: Currency Doubleday, 1996.

Sharma, Ruchir. "The Ever-Emerging Markets: Why Economic Forecasts Fail." *Foreign Affairs* 91, no. 1 (January/February 2014): 52-6.

Stolberg, Alan G. "Crafting National Interests in the 21st Century." In *U.S. Army War College Guide to National Security Issues,* vol. 2*, National Security Policy and Strategy*. 5th ed., edited by J. Boone Bartholomew, Jr. Carlisle Barracks, PA: U.S. Army War College, 2012.

Strange, Joseph L., and Richard Iron. "Center of Gravity: What Clausewitz Really Meant." *Joint Forces Quarterly* 35 (October 2004): 20-7.

U.S. Army War College. *Campaign Planning Handbook: Academic Year 2014.* Carlisle
      Barracks, PA: U.S. Army War College, 2013.

Wass de Czege, Brig Gen Huba. "Logic and Method of Collaborative Design." *Small Wars
      Journal* (12 May 2010). http://smallwarsjournal.com/jrnl/art/the-logic-and-method-of-
      collaborative-design (accessed 6 March 2014).

———. "Operational Art: Continually Making Two Kinds of Choices in Harmony While
      Learning and Adapting." *Army* 61, no. 9 (September 2011): 46-56.

———. To the author. E-mail, 6 March 2014.

Woodward, Bob. *Obama's Wars.* New York, NY: Simon & Schuster, 2010.