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Cover: Nestled within Peshawar Valley, the Kabul River flows for 430 miles through eastern Afghanistan to Pakistan. Photo by LtCol David A. Benhoff.

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President's Foreword

In *Marine Corps Vision & Strategy 2025*, the 34th Commandant of the Marine Corps, General James T. Conway, laid out his vision of the Corps: "Marines must be agile, capable of transitioning seamlessly between fighting, training, advising, and assisting—or performing all of these tasks simultaneously. . . . Future operational environments will place a premium on agile expeditionary forces, able to act with unprecedented speed and versatility in austere conditions against a wide range of adversaries." Just as the nature of warfare has changed over time, so too has our need to assess future operations and the ever-evolving environment in which our forces must act.

The introductory article in this issue of the *Marine Corps University Journal* highlights the changing nature of assessment approaches used in military operations and focuses on how our assumptions must also evolve to keep pace with dynamic environments. David Zvijac explores the impact of current operational assessment processes but also proposes a new conceptual framework for military leaders. Zvijac suggests that "military activity evolves over time," responding as the environment changes, and that it cannot unfold in a sequential order with any military precision. Operational assessment must evolve in a similar manner; the outcomes of most events cascade through a system often in the most unpredictable manner. For Zvijac, this is typically where the fallacy of assessment methods becomes most apparent, particularly if the leadership believes that their movement is linear or can be controlled in any way. In a world full of civil and political unrest, where the functionality of a government and its forces are impacted as much by austere budgets as they are by the environment, leaders must consider an alternative approach to evaluating their operations.

Today's environment of uncertainty is nearly universal. For example, the way forward is unclear regarding Afghanistan's future security, particularly due to its potential agricultural instability. Jason J. Morrissette and Douglas A. Borer describe what could be a stark future for the citizens of Afghanistan and its neighbors when U.S. and International Security Assistance Forces withdraw. While many may assume the picture is bleak because of the threat of terrorists,

the authors claim the nation's security challenges are more directly related to the country's agricultural revival (or lack thereof) and its dependence on scarce resources. In a country where 80 percent of the population is dependent on farming and herding but less than 6 percent of the arable land is cultivated, obstacles to building an agricultural system based on crops other than opium poppies seem virtually insurmountable. To accomplish any part of this goal, Afghan water consumption will increase significantly, causing water scarcity along the major source—the Amu Darya River—and in turn likely amplifying tensions along its borders with Tajikistan, Turkmenistan, and Uzbekistan. External actors who seek to support agricultural efforts in such Central Asian countries as Afghanistan must therefore be mindful of the broader regional hydropolitical challenges when crafting their policies. Morrissette and Borer argue that it is not enough to consider strengthening water-sharing institutions or prioritizing water-efficient crops. These assistance policies must move a step further and also anticipate other domestic needs, such as food aid, to reduce the effects of increased freshwater withdrawals.

Regional policies have far-reaching effects, particularly when dealing with China and Korea. On 8 October 2014, China surpassed the United States as the world's largest economy. China also represents South Korea's top trading partner and North Korea's primary source of aid. Stability in the region remains crucial to China's security interests. Brian J. Ellison tackles alternative approaches to the current course of China's intervention policies regarding Korean unification and U.S. considerations for becoming a supporting force on the Korean Peninsula. While considering a variety of outcome scenarios, the implications for U.S. policy makers remain complicated should third-party intervention be necessary. If U.S. forces become drawn deeper into the dialogue, the potential for sustained conflict with China creates a situation the United States might be unable to terminate.

While the way forward may not be clear in all situations, American national security planners must find some balance between a post-Afghanistan operational tempo and equipping, manning, and modernizing the military following more than a decade of sustained combat in Operations Iraqi Freedom and Enduring Freedom. In the

interim, Marine Corps leadership and forces in the field will look to the faculty and staff at Marine Corps University to offer an open forum for discussion, bringing professional military education to Marines across the globe.

H. G. Pratt
Brigadier General, U.S. Marine Corps Reserve
President, Marine Corps University

A Norwegian F-16 taxis on the runway of Souda Air Base in Crete after dropping bombs on Libyan-regime tanks during Operation Odyssey Dawn. Photo courtesy of the Norwegian military.

An Alternative Approach for Operational Assessment

by David Zvijac

No plan survives contact with the enemy. This aphorism—attributed to Prussian Field Marshal Helmuth von Moltke—is well known and accepted, at least at the operational level of war. Many aspects of warfare have varied over the past century, but the fundamental characteristics of uncertainty and unpredictability persist. Senior military leaders, as well as academics, attribute the outcome that plans often shift to the fact that modern military operations are complex adaptive systems (i.e., they involve diverse, multifaceted elements that interact with and adjust to changes in the environment). This paper explores the ramifications of that perspective for operational assessment processes and proposes a new concept.

The need for alternative assessment approaches is motivated by the perception that senior leadership finds current schemes unsatisfying and unhelpful. Problems with the current methodology derive from faulty assumptions, ambiguous metrics, and incomplete understanding of a commander's expectations about assessment. This article proposes something different—something that might pique the interest of senior decision makers as an approach they may find helpful. It suggests that assessment processes should be developed with the mind-set that military activity *evolves* over time in response to the operational environment, rather than unfolding sequentially with mechanical order and procedural precision.

The analogy of evolution has important implications for assessment processes. In particular, the focus should not be on a certain, predetermined end state. The goal is not to reach a specific end state,

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but to get to an acceptable one. For such a point of view, assessment is about understanding the conditions for success and determining how to establish those conditions. Instead of heading in a set direction, the intent is to foster steady progress toward more favorable circumstances. The evolutionary paradigm can better accommodate—and facilitate—an assessment process that is more useful and accepted by senior military decision makers as it leans to the tactical side, where near-term progress is more obvious and fruitful policy courses of action can be internalized for future decisions. Importantly, this paradigm responds more directly to the key question, "What to do next?"

What Is the Purpose of Operational Assessment?

Military assessment can occur at many levels, ranging from battle damage assessment to campaign planning to strategic policy making. At all levels, a commander uses assessment as an aid to decision making. In particular, assessment is a key component of command and control at the operational level of war. Within the familiar cycle of the OODA (observe, orient, decide, and act) loop, assessment is associated with the "orient" step: filtering data gained in the "observe" step.[1]

Formal doctrine describes assessment in two ways: determining the extent to which operations are on plan and trying to determine the desired effect on the enemy.[2] Doctrine also emphasizes that assessment helps measure progress toward accomplishing a task. There are frequent allusions in doctrinal documents to the *potential* of an activity—that is, what might happen next. Past and current status and actions are of limited value unless they serve as a basis for the future.

Careful reading of doctrine indicates that assessment is more than a snapshot. It is an interpretation of how all the pieces are interconnected. At the operational level of war, that interpretation is complicated. Actions can be coupled, and a military commander must consider the implications of diplomatic, political, economic, financial,

[1] John Boyd's oft-cited briefing "The Essence of Winning and Losing" is available at www.tobeortodo.com/all-things-john-boyd.

[2] Joint Chiefs of Staff, Joint Publication 5-0, *Joint Operation Planning* (Washington, DC: Joint Chiefs of Staff, 2011), D-1.

social, ethnoreligious, and other contextual factors. Many analyses have argued that assessment is crucial at the operational level of war, yet it seems underemphasized in most discussions of staff structure and processes. Few senior leaders seem to find value in operational assessment, and a key reason is that current approaches do not seem to help the commander. As a result, assessment cells are typically undermanned and undertrained—an ad hoc addendum to the warfighting effort.[3]

What Is Wrong with Current Approaches?

Methodologies for assessment processes at the operational level have fallen on hard times of late. Most prominently, as commander of U.S. Joint Forces Command, Marine General James N. Mattis forbade the use of terms related to effects-based operations, operational net assessment, and systems-of-systems analysis.[4] Undoubtedly, his decision was well founded: the concepts have been misused and abused. Furthermore, as General Mattis pointed out, they are cumbersome, pseudoanalytic techniques based on faulty assumptions, at least within the context of military operations.

Past and current status and actions are of limited value unless they serve as a basis for the future.

First, activities such as building databases for nodal analysis have become unwieldy and unlikely to provide a commander with the timely support he or she needs. Second, measures of effectiveness can be ambiguous and difficult to determine. Often the effects of military actions are not readily measurable with the resources available, and one cannot reliably correlate actions to root causes, especially when taking into consideration the broader diplomatic, informational, and economic contexts. Assumptions that the opposition's observed actions are always in response to military actions are incorrect and

[3] Jonathan Schroden, "Why Operations Assessments Fail: It's Not Just the Metrics," *Naval War College Review* 64, no. 4 (Autumn 2011): 89–102.
[4] Gen James N. Mattis, memorandum for U.S. Joint Force Command, "Assessment of Effects Based Operations," 14 August 2008.

potentially counterproductive. Third, there is a fundamental misunderstanding of the concept of situational awareness, which informs the decision-making process. Situational awareness is more than the simple perception of data. It involves understanding how the elements interact and forecasting what comes next.[5] The highest level of situational awareness involves more than connecting the latest information with history; it involves *projection* to the future to answer the question, "What is likely to happen next?"

The ultimate reason for dissatisfaction with the current approaches for assessment is that they rarely take that ultimate step to look to the future. Assessment can present a commander with a reasonable first draft: "If I were you today, I would focus on these key factors to plot the way ahead." The commander would then ask probing questions to determine if he or she should agree. The commander can have a deeper understanding of the operation, more relevant experience, and other sources, but he or she will also have less time than an assessment cell to ponder the possible ramifications of the information. In effect, the assessment would provide a jumping-off point for the commander to fashion his or her own perspective on the current situation and the way ahead.

Dealing with the Question "What To Do Next?"

Essays on military operations frequently use the term "complex adaptive system." However, the discussions stick to old concepts rather than follow through with the ramifications of the term. Despite caveats about the need for flexibility and innovation, the authors essentially advocate a return to doctrinal principles: mission orders; ways, means, and ends; etc. These are solid, enduring concepts, but a mere return to classic approaches overlooks the implications of modern military operations.

Operational environments are dynamic because the enemy can be smart and adaptive. Chaos makes war a complex adaptive system,

[5] J. Salerno, M. Hinman, and D. Boulware, "Building a Framework for Situational Awareness," Proceedings of the 7th International Conference on Information Fusion (Stockholm, Sweden, 2004).

rather than an equilibrium-based system.[6] Thus, it is not scientifically possible to predict the outcome of actions: the force must act in the face of uncertainty. The overall system is open and weakly coupled, not tightly interconnected. For such nonlinear systems, cause and effect are not straightforward. Outcomes can cascade throughout the system in unpredictable ways. These insights highlight the faulty assumptions upon which current operational assessment methods are based: that movement is linear and the environment can be controlled.

Operational environments are dynamic because the enemy can be smart and adaptive. Chaos makes war a complex adaptive system, rather than an equilibrium-based system.

Complex adaptive systems involve diverse, multifaceted elements that interact with and adjust to changes in the environment. The elements interact in apparently random or chaotic ways, although patterns emerge, which help characterize the overall system. An element does not have to be perfect for it to thrive in the environment; it just needs to be good enough and able to adapt to maintain a good fit with the environment. Having greater variety enhances the strength of the system to preserve the advantage.

Complex environments often embed conditions for a class of problems called *wicked*, which are conceptually different from simpler, "tame" problems and require alternative methods and paradigms. The roots of wicked problems are multifaceted and tangled; the problem involves many stakeholders with different values and priorities, and the problem changes with attempts to address it—especially in the case of resilient, adaptive opponents.[7] Promising approaches for deal-

[6] For further background on complex adaptive systems in the context of military operations, consider Keith L. Green, "Complex Adaptive Systems in Military Analysis," IDA Document D-4313, Institute for Defense Analyses, May 2011, https://www.ida.org/~/media/Corporate/Files/Publications/IDA_Documents/JAWD/ida-document-d-4313.pdf; and Andrew Ilachinski, "Complex Adaptive Systems, Agent-Based Models, and Some Heuristics Regarding Their Applicability to Operations Research," CNA Information Memorandum DIM-2012-U-000753, April 2012.

[7] John C. Camillus, "Strategy as a Wicked Problem," *Harvard Business Review* (May 2008), 99–106.

ing with wicked problems involve a focus on action—even if unsure of the outcome—because of the tenuous connection between cause and effect.[8] This offensive mind-set is consistent with military philosophy. In addition, formulating a solution occurs simultaneously with understanding the problem.

A significant characteristic of wicked problems is that there are no clean, explicit solutions. Answers are not "right" or "wrong," but "good enough" or "not good enough."[9] Indeed, there is not necessarily an ultimate, unique answer—but the search for solutions does not stop. Other research discusses how management teams simultaneously discover targets and aim at them, create rules and follow them, and are clearer about which directions are not right than about specifying final results. Those attributes are consistent with the phenomenon of wicked problems. This is not an eccentric notion for military operations, for Clausewitz himself held that war's results are never absolutely final.[10]

So what are the implications of these complex environments for a military commander in terms of assessment and decision making? The approach should be to steer consistently toward improvement and progress. The issue then is how to maintain forward momentum while allowing for uncertainty and expecting stochasticity.

An Alternative Paradigm

We contend that the attributes of complex environments are consistent with the paradigm of evolution. Rather than thinking of a military action as an operation unfolding sequentially with mechanical order and procedural precision, one should think of the action as a complex system adapting over time in response to its environment. Evolution brings to mind the concept of survival of the fittest, but the meaning here is more along the lines of selective breeding, where some level of control can be exerted over the developments. That is, evolution involves mixing and matching attributes that combine synergistically and minimize adverse effects.

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[8] Jeff Conklin, *Dialog Mapping: Building Shared Understanding of Wicked Problems* (Chichester, UK: John Wiley and Sons, 2006).
[9] Ibid.
[10] Alan Beyerchen, "Clausewitz, Nonlinearity and the Unpredictability of War," *International Security* 17, no. 3 (Winter 1992): 59–90.

Complexity theory suggests that, just as evolution does not have a predetermined destination, military plans should not prescribe detailed end-state conditions. This is the problem with traditional systems-of-systems-analysis approaches that define an end state and measure progress with stoplights and thermograph charts. That approach is inconsistent with the inherent features of complex systems, for which goal setting is problematic.

As an alternative to traditional approaches, we consider what characteristics of an assessment approach would help the commander by supporting his decision-making process and what would be feasible for a staff to undertake. The table below summarizes the comparison of approaches. First, progress should not be assessed along the plan because the plan is subject to change, and the changes are not necessarily obvious or predictable. In complex systems, actions occur on many different levels and scales. Emergent properties—seemingly hidden perhaps because they pertain at different timescales or degrees of detail than the basic plan—can affect the characteristics of the overall conflict environment. That is, something that did not seem to matter soon becomes a groundbreaking or driving feature. Building on these newly critical features can move the plan further from the original concept and closer to a new reality. Hence, an attempt to analyze the plan as operations proceed is fraught with difficulties and inconsistencies.

Second, as a corollary, the focus on some prescribed end state is not feasible. There are disadvantages to striving toward fixed, parti-

Table 1. Comparison of approaches for assessment

	Traditional doctrinal approach	**New evolution paradigm**	**Rationale**
Process	Methodically follow the plan	Respond to changing environment	Uncertainty, stochastic events
Goals	Reach end state	Flex in response to the environment	Adversary, as well as assumptions, changes over time
Progress	Green thermographs	Better conditions, more options	Desire to reach an acceptable end state
Metrics	Attainment of goals	Gain information, mitigate risks	Helps answer the question "what to do next?"
Presentation	Status report	What to do next	More helpful for the decision-making process

cular goals: unintended consequences, alternative interpretations of data, and mission creep, to name a few. Instead, assessments should be made of characteristics that are favorable to preferred outcomes. In other words, the appropriate focus should not be on the *specific* end state, but rather on the conditions for an *acceptable* end state. In such a way, assessment is about understanding the conditions for success and determining how to set those conditions. Setting the conditions means going beneath the operational level and manipulating the emergent properties that can drive the characteristics of the overall conflict system.

The fundamental feature of assessment, then, is to gauge movement toward improved, albeit uncertain, conditions. So what constitutes progress toward more favorable circumstances? How does one thrive in an operational environment? This essay addresses the issue based on continuing analogies to biological evolution. Evolution embodies an ongoing exchange of information between an organism and the environment. Organisms survive because they are more attuned to the environment and they are equipped to compete for sustenance better than their competitors. Because they are more attuned to the environment, these organisms experience reduced stress. Because they compete for resources better than their competitors, the effects of conflict are reduced and there is greater success in conflict. Thus, robust, although not necessarily optimal, characteristics help align an organism with the environment.

Rather than thinking of a military action as an operation unfolding sequentially with mechanical order and procedural precision, one should think of the action as a complex system adapting over time in response to its environment.

Further, evolutionary progress is associated with having more options; advanced organisms are more complex and, consequently, can do a greater variety of tasks (as well as do specific things better). So, progress involves striving for greater complexity—generating more ways of dealing with the operational environment. At the same time, limiting the options available for an opponent can shift the overall environment in one's favor.

Finally, progress in evolution is associated with gaining more information, thereby building a more robust story of what is going on. It is important to keep in mind the type of information required for decision making at the operational level of war. Rather than pure data (for example, track and target locations, weapons status, and friendly force status—that is, mostly facts related to specific warfighting requirements), the commander needs to know about broader, more contextual aspects.

The ultimate purpose of assessment is to synthesize the more narrowly focused input data. Information management is critical to developing options because there is a perhaps counterintuitive downside to complexity: the more options you have, the greater the possibility of making wrong choices. Complication can mean vulnerability if failures cascade, as they can in complex systems. So, another part of the challenge is to structure the system so that the features are self-supporting and there is redundancy to counteract and compensate for potential failures.

Scenario developments lead to options for what might happen next, and the appreciation of what might happen next begs the question of what to do about it. Situational awareness informs the choice of the preferred path to achieve the desired outcomes. Ultimately, the decision is to draw a course of action. While situational awareness is a state of knowledge about a dynamic environment, the environment is too extensive and interconnected to appreciate fully. Thus, the decision maker cannot perceive everything; he or she must focus their attention—and this is where assessment comes into play.

How Would the New Paradigm Work?

Real-world events can illuminate the issues further and help define requisite features of an effective assessment process. So, a few examples from history are cited next to demonstrate and justify how the new assessment scheme might prove beneficial by mitigating the potential shortcomings of traditional approaches.

Lack of clear and comprehensive guidance. Operation Desert Thunder was the effort to provide military presence and capability

during negotiations in 1997–98 between the United Nations (UN) and Iraq about weapons of mass destruction. Desert Thunder elucidated new challenges for military forces. To military planners, the "way it should work" had been very clear:

- Political leadership establishes broad objectives.
- The objectives are translated to a military mission and objectives.
- Planners develop courses of action to achieve the objectives.
- After choosing one course of action, mission planning takes place involving target selection, force assignment, and end-state definition.

Desert Thunder did not work that way, however. The political objective conflated the reason for and the constraints on using air strikes—introducing enormous uncertainty for the planners. The uncertainty demanded significant flexibility for the operational forces. The events of Desert Thunder suggested that planning for uncertainty would become the typical expectation for future military operations.[11]

Ultimately, events led to Operation Iraqi Freedom, another operation that signaled continuing changes in the nature of the use of military forces. Forces moved via a process of continual requests for assets and deployment orders; some were pushed forward by the Services rather than pulled at the request of the theater commanders. Support requirements—complicated by uncertainties about basing, Coalition negotiations, etc.—muddied planning options and timelines.

Most recently, Operation Odyssey Dawn (Libya, 2011) provided another example where translating political objectives into viable and coherent military objectives proved difficult. Guidance was confusing: was the intent of operations regime change or protecting human life? UN Security Council resolutions authorized different military responses: protecting civilian populations, establishing an arms embargo, and enforcing a no-fly zone. Force requirements,

[11] Christine H. Fox, Maureen A. Wigge, and Alan C. Brown, *Operation Desert Thunder Quicklook: Executive Summary*, CNA Report CNR 223 (1998).

operations, intelligence focus, and measures of success are different for each scenario. Further, the U.S. government wanted to transfer leadership responsibilities as quickly as possible, with the timing of transition not determined by completion of operations.

Postevent reconstruction points out the negative repercussions of poor guidance.[12] However, political complications are expected to be part and parcel of many operations. Thus, a changing operational environment and uncertain end states will be a customary feature of modern military operations. Review of recent military operations highlights the common characteristic of an ends-means disconnect: a mismatch between available military tools and publically stated goals. This can cause problems achieving a particular goal and force the decision process to deviate from the standard military decision process. The tenor of evolution-oriented metrics helps the commander set the conditions for a broad array of options, rather than optimizing a particular way ahead.

In Operation Desert Thunder, the political objective conflated the reason for and the constraints on using air strikes—introducing enormous uncertainty for the planners. The uncertainty demanded significant flexibility for the operational forces.

Mission creep. A second aspect of the difficulties of focusing on fixed end states arises in several examples of "mission creep" during recent military operations. Operation Restore Hope in the early 1990s was intended to establish a secure environment in Somalia so that humanitarian organizations could provide famine relief. However, what started as a mission to feed starving civilians ended in a failed attack on a Somali warlord. The change in operational focus mirrored new, broad objectives of nation building, which were embodied in UN resolutions. Those resolutions authorized an expanded UN security presence to disarm combatants, provide assistance for rebuilding the country, and eventually conduct air and ground military operations against disruptive factions.

[12] Joe Quartararo Sr., Michael Rovenolt, and Randy White, "Libya's Operation Odyssey Dawn: Command and Control," *Prism* 3, no. 3 (March 2012): 141–56.

Contradictory and uncoordinated strategy and policy affected operational planning and execution. Reconstruction analysis proclaimed, "UN resolutions are not an acceptable replacement for clear policy aims and a sufficient operational plan. Without such a clear policy, there can be no concrete operational objectives or measurable end states."[13] Based on recent history, however, it does not seem reasonable to expect such prerequisites. Evolution-oriented metrics capture the gist of more recent operations, rather than being wedded to anachronistic and potentially misleading aspects of what progress should look like.

Changes in the operational environment. The problem of fixating on prescribed end states is complicated by changes in the focus of campaign plans in response to changes in the operational environment. For example, the counterpiracy campaign near East Africa has been undergoing a shift. The policy of deploying vessels to protect vulnerable ships has expanded—with the authorization of the UN Security Council—to attacking onshore infrastructure. As another example, the movement of drugs from South America to the United States has changed significantly over the years, as have the options to stem or deter that movement. In the past, small aircraft landed in south Florida to offload drugs. Later, the primary tactic was to airdrop drug packages to go-fast boats for the final leg to the U.S. mainland. Today, the more likely scenarios involve the movement of drugs from South America to Central America and Mexico with transportation over land into the United States as well as the use of submersible vessels.

The effectiveness of applied forces and tactics to counter the movement of drugs has changed the operational environment and threat characteristics and tactics. As a result, paradigms for applying forces have adjusted in response and metrics related to the new paradigms have changed in concert. Perhaps, at the strategic level, the (arguably unrealistic) end state remains the elimination of drugs. However, the operational end state continually changes, and the metrics and assessment processes need to adjust as well. Given the uncertainty, there is little history and no persistent trends to track.

[13] Maj Michael F. Beech, USA, *"Mission Creep": A Case Study of U.S. Involvement in Somalia* (Leavenworth, KS: Command and General Staff College, 1996).

The tenor of evolution-oriented metrics focuses on maintaining tactical advantages in the current environment.

Changes in the operational environment can affect other nontraditional scenarios, such as humanitarian assistance and disaster relief. Military support spearheaded relief and restoration efforts during Operation Unified Relief in response to the 2010 Haiti earthquake. However, the ultimate end state was to turn over the entire mission to civilian authorities and then redeploy. The determination at that point in time was that the status of the population and infrastructure was "better"—a rather vague and undetermined benchmark. Furthermore, many turnover issues were beyond the direct control of the military and driven by the capabilities and status of international and nongovernment agencies, which would maintain the effort. Indeed, relief and restoration activities continued after redeployment of the military forces.

Asymmetric adversaries. Finally, complications can arise in the uncertain environments associated with complex operations—especially when adversaries have the wherewithal to choose from a menu of asymmetric options. The infamous Millennium Challenge 2002 exercise is a case in point. Despite the Blue Team having extensive databases and methodologies for systematically understanding the intentions and capabilities of the enemy, the Red Team commander took advantage of the fog of war and conducted unpredictable maneuvers with devastating effects.[14] Much postevent analysis decried the restart of the exercise that undid the damage. Undoubtedly, important training and lessons learned were gained from restarting the exercise—which ignored and countermanded the outcome of the unexpected threat successes—but the initial episode highlighted how warfare was inherently unpredictable and nonlinear. If the exercise had stayed on the new course, there would have been an urgent need to revise the way forward and reevaluate the nature of favorable operational outcomes.

The exercise event represents an instance of an "operation other than traditional warfare"—operations that have become more typical

[14] Referenced in Malcolm Gladwell, *Blink: The Power of Thinking without Thinking* (New York: Little, Brown, 2005), 102–11.

since the end of the Cold War. For such nontraditional missions, tensions stem from a misconception that there are distinct military and civilian (including political, economic, and humanitarian) missions. The civilian aspects of the operation are often difficult to identify and prone to rapid shifts and changes, leaving the military commander the task of guessing at the political objectives. There are few standard metrics or even well-developed military judgment and intuition for assessment in these situations. The tenor of evolution-oriented metrics focuses on maintaining tactical advantages in the current environment.

The Way Ahead

This report proposes a new way to think about operational assessment. Developing an alternative approach requires a fuller appreciation of the implications of modern military operations that take place in complex, dynamic environments. The connection between cause and effect is tenuous at best, and forces must act in the face of uncertainty. This is not a dramatic, eye-opening statement—just one that has not been followed through to conclusion. The insights in this article suggest that the paradigm of evolution is well suited to describing military activities at the operational level of war. Rather than thinking of a military action as an operation unfolding sequentially with mechanical order and procedural precision, one should think of the action as evolutionary—that is, as a complex system adapting over time in response to its environment. Instead of looking toward some unknowable future, one should focus on characteristics that demonstrate progress.

Undoubtedly, important training and lessons learned were gained from restarting the exercise—which ignored and countermanded the outcome of the unexpected threat successes—but the initial episode highlighted how warfare was inherently unpredictable and nonlinear.

So, what does that mean in practice? First, it means that assessment must provide the commander with an understanding of the changing operational environment so that he or she can begin to match up the resources needed with the next steps to be taken.

Awareness of the context ensures that the commander can move with and not against the flow of events as she or he attempts to become more attuned to the environment, as the commander's focus is on near-term decisions about the next feasible steps. Most important, it means that the "so what?" question comes first. Instead of presenting a set of predetermined data points and inferring their potential meaning regarding a plan to reach a particular end state, the approach is to set the conditions in order to thrive in the current environment and foster further progress. Assessment provides the information needed to take the appropriate next steps.

Is the alternative assessment paradigm of evolution revolutionary? There are indeed aspects that certainly sound nondoctrinal. In particular, the shift away from a focus on prescribed end states and from matching the current state to the formal plan is a major change. On the other hand, the proposed approach considers much of the same information and retains many key characteristics of traditional planning and assessment, although with a different perspective. Assessment always has been part of the commander's decision-making process, but this article emphasizes that the question comes first, not the data collection, and that the focus is more on the short term because it is necessary to wait to see how things play out before taking subsequent steps. Traditional planning acknowledges the need to reevaluate in case of drastic changes in the situation, but the historical and analytical evidence shows that often the changes are subtle and that one can take the wrong road before realizing it. By using the mind-set of evolution, one is less likely to make that mistake.

The concept of setting the conditions (as opposed to measuring effects) is consistent with the use of measures of performance as indicators of activities that are intended to steer toward progress. Measures of performance offer an alternative approach to ambiguous and undeterminable measures of effectiveness; they are indicators or characteristics that have been proven to enhance processes or that contain logical and self-consistent concepts for improving processes.

Why might this evolutionary assessment paradigm be more useful for an operational commander? First, we contend that it is constructive that assessments are not closely coordinated with plans.

Having an independent, objective assessment cell provides an external, extra set of eyes to help avoid the potential problems of "groupthink." An independent look exploits diversity and acknowledges the value of multiple points of view. The concept of evolution, supplemented by an adaptable point of view, can help avoid being misled by hidden factors, uncertain or unmeasurable indicators, and emerging unintended consequences.

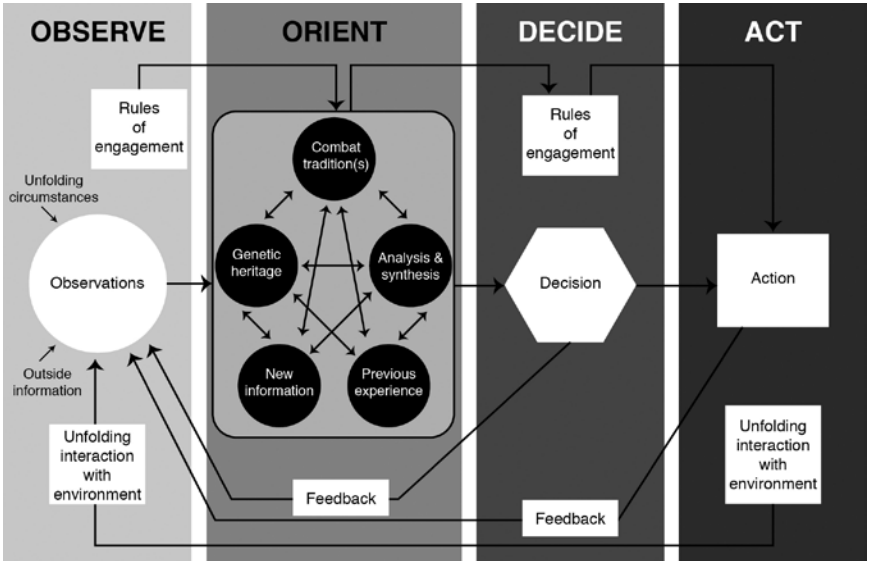
In addition, the perspective is aligned with the concept of improvisation.[15] Flexibility and adaptability make it harder for an adversary to preempt or counteract our options because they are not able to track the repercussions as well as we can with assessment. Again, this is not a bizarre concept. Continual reevaluation is consistent with the cycle of the OODA loop (figure 1). Acknowledging the perspective of evolution may facilitate keeping the opponent off balance and "getting inside his OODA loop."

Traditional planning acknowledges the need to reevaluate in case of drastic changes in the situation, but the historical and analytical evidence shows that often the changes are subtle and that one can take the wrong road before realizing it.

Further, the new perspective has the potential appeal to operational decision makers. Assessment likely will be more acceptable and interesting to the commander if it offers guidance to make the type of decisions within his or her purview. At the practical level, it leans more toward the tactical than to the strategic side. Guidance from higher authority often relates to the effects that military operations should have on the enemy—effects that are not readily measureable with the resources available at lower echelons. Translation of that strategic-level guidance often remains broad and abstract, and operational commanders have difficulty seeing the impact of their actions. However, showing near-term progress and promising changes to the operational environment are more obvious and internalized for

[15] Karl E. Weick, "Improvisation as a Mindset for Organizational Analysis," *Organization Science* 9, no. 5 (September–October 1998): 543–55.

Figure 1. Decision cycle (OODA loop) developed by Colonel John Boyd, USAF



subsequent action.[16] The use of measures of performance also is consistent with a short-term viewpoint. The evolution paradigm helps justify why input measures and indicators are important and helps solve the frustrations of not being able to measure output.

Admittedly, the paradigm presented so far is largely conceptual, and there are aspects, such as the following situations, that need further examination:

- If the system is being controlled by a series of short steps, how can one forestall drastic or erratic shifts of course? Adaptive systems are known to be notoriously difficult to control, and there is a tendency to overcorrect. Perhaps the near-term, tactical mind-set can mitigate such problems by controlling the local core of trajectories to minimize the likelihood of straying too far afield, to unrealistic and unsustainable courses of action.
- Are there issues related to focusing on symptoms rather than causes? In a sense, that is the proposed surrogate for

[16] George Modelski, "Evolutionary Paradigm for Global Politic," *International Studies Quarterly* 40, no. 3 (September 1996): 321–42.

not being able to prove cause-and-effect. Treating symptoms will not resolve systemic problems, but perhaps such aspects are better left to nonmilitary efforts.

- Are there consequences to downplaying the long view—or undesired consequences in other dimensions—because there are too many variables to consider? As long as "elegant" solutions are not required, this issue may not be serious. Neatly packaged solutions are not necessary. Perhaps there are ways to clarify the connections between pieces, rather than merely displaying a series of independent, uncorrelated red-amber-green stoplight charts as a way of demonstrating the coherence of the overall environment under construction.

While military judgment and planning factors provide a foundation to assess how certain elements are dominant in that undertaking, more rigorous analytic tools can augment and improve those procedures.

More quantitative analysis might apply control theory to identify drivers that steer best toward improvements in the operational environment. Determining the relative strength and importance of the options available could be derived from a methodology similar to the Google PageRank algorithm—a fast, robust method developed initially to assign a value to a Web page.[17] The algorithm might be generalized to identify the more critical options for a military commander to choose. Associated visualization tools, such as force-directed graphs—which depict spatially where greater means of influence lie—are attractive for rendering descriptions of how the military forces might adapt. Such insights can provide direction to help an operational commander steer toward improvement and progress.

Setting the conditions for success involves manipulating the driving factors that are deeper down in the overall process—deeper than broad, strategic features. With the mind-set of evolution, suc-

[17] Amy N. Langville and Carl D. Meyer, *Google's PageRank and Beyond: The Science of Search Engine Rankings* (Princeton, NJ: Princeton University Press, 2006).

cess involves becoming more attuned to the overall environment: accruing more information, having more and better options to deal with uncertain circumstances, and being able to compete for resources more effectively. While military judgment and planning factors provide a foundation to assess how certain elements are dominant in that undertaking, more rigorous analytic tools can augment and improve those procedures. Most important, assessment procedures can be refocused to address the keen interests of decision makers at the operational level of war and respond more directly to the key question, "What to do next?"

In an environment where 80 percent of the population depends on some form of agricultural activities, attempts at legitimate modes of farming or herding in Afghanistan depend on stability and access to water sources. Photo by LtCol David A. Benhoff.

Beyond 2014: Afghanistan's Agricultural Revival, Water Scarcity, and Regional Insecurity

by Jason J. Morrissette and Douglas A. Borer

The future of governance and security in Afghanistan is shrouded in a fog of uncertainty. It is unclear what will happen to the leading domestic players once the United States and other international actors withdraw the bulk of International Security Assistance Force (ISAF) military forces in late 2014. Will President Hamid Karzai's successor manage to defeat the Taliban insurgency, reestablish the central government's legitimacy, and effectively maintain order after the departure of foreign troops? Will there be some kind of "grand compromise" that enables the Taliban to join as partners in the post-Karzai government? Or will the Taliban overthrow the successor's regime and return Afghanistan to its pre-9/11 rule? Each of these three scenarios could occur, and each would result in potentially different futures for the citizens of Afghanistan and for those of its neighboring countries. Unlike the United States, members of the

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European Union, and other distant members of the international community who see Afghan-based terrorists regaining a territorial sanctuary as the primary threat to regional and global security, the states that border Afghanistan face more complex security challenges. This article explores how these security challenges are connected to numerous low-profile agricultural development projects currently underway in Afghanistan—projects with potentially monumental stakes for the future of Afghanistan and Central Asia.

We begin by examining the ongoing agricultural revival of Afghanistan as one of the potential drivers to either bring peace or to sow the seeds of discord over a scarce but critical resource—freshwater. After presenting an overview of the regional problem set, we provide policy guidance that, if implemented proactively by Afghanistan, its neighbors, and international stakeholders, might prevent future conflict over scarce water resources.

Background: Water's Role in Afghan Agriculture

As President Barack H. Obama noted during an address to the United States Military Academy at West Point in December 2009, "Our top reconstruction priority is implementing a civilian-military agriculture redevelopment strategy to restore Afghanistan's once vibrant agriculture sector. This will help sap the insurgency of fighters and of income from poppy cultivation."[1] With 80 percent of the population dependent on farming, herding, or both, and less than 6 percent of the country's arable land currently cultivated,[2] Afghanistan clearly faces a massive undertaking as it attempts to rebuild legitimate, nonpoppy agriculture and, in the process, eliminate a key source of funding for the Taliban insurgency. Moreover, the fact that opium poppy cultivation in Afghanistan actually *increased* for the

[1] Barack Obama, "Remarks by the President in Address to the Nation on the Way Forward in Afghanistan and Pakistan" (speech, United States Military Academy, West Point, NY, 1 December 2009), http://www.whitehouse.gov/the-press-office/remarks-president-address-nation-way-forward-afghanistan-and-pakistan.

[2] U.S. Department of Agriculture (USDA), Foreign Agricultural Service, "USDA at Work for Agriculture in Afghanistan," October 2009, http://usacac.army.mil/cac2/call/docs/10-34/ch_9.asp.

third year in a row in 2012 indicates that much work remains to be done on this front.[3]

The United States and other Western actors have offered agricultural development assistance to Afghanistan in its mission to replace fields of poppies with the lush fruit and nut orchards that largely defined Afghan agriculture prior to the 1970s. In the past decade, Malia Wollan observes that "the United States has spent more than $1 billion on Afghanistan's agricultural sector, in part to create markets and options for farmers other than growing opium poppies."[4] Between 2009 and 2012, the United States Agency for International Development established a $100 million Agricultural Development Fund to provide loans to Afghan farmers; trained more than 633,000 men and women in improved farm and business skills; and distributed seeds, tools, and other equipment to more than a million farmers in rural Afghanistan.[5] The United States Department of Agriculture (USDA), for instance, has "helped to install windmills to pump water for irrigation and livestock, trained veterinarians to detect and treat parasites, refurbished a university's agricultural research laboratory, stabilized eroded river banks and irrigation canals, developed postharvest storage facilities, established nurseries and reforested areas, rehabilitated degraded orchards, and mentored

Unlike the United States, members of the European Union, and other distant members of the international community who see Afghan-based terrorists regaining a territorial sanctuary as the primary threat to regional and global security, the states that border Afghanistan face more complex security challenges.

[3] Alissa J. Rubin, "Opium Cultivation Rose This Year in Afghanistan, U.N. Survey Shows," *New York Times*, 20 November 2012, http://www.nytimes.com/2012/11/21/world/asia/afghan-opium-cultivation-rose-in-2012-un-says.html?_r=0.

[4] Malia Wollan, "Duplicating Afghanistan from the Ground Up," *New York Times*, 14 April 2012, http://www.nytimes.com/2012/04/15/us/duplicating-afghanistan-from-the-ground-up.html?_r=0.

[5] United States Agency for International Development (USAID), "Afghanistan Fact Sheet: Agriculture," 2013, http://afghanistan.usaid.gov/documents/document/Document/2673/Fact_Sheet_Agricultural_Sector__Feb_2013.

provincial directors of agriculture."[6] In 2011, USDA also launched the Agricultural Development for Afghanistan Pre-Deployment Training program, which was created to familiarize aid workers and soon-to-be deployed military personnel alike with the basics of Afghan farming.[7] Concurrently, international organizations like the World Bank and the Food and Agriculture Organization of the United Nations (UN) are also active in supporting agricultural rehabilitation in Afghanistan.

Despite the best efforts of these international actors to promote Afghanistan's agricultural revival, a fundamental challenge remains: the expansion of agricultural productivity into new crops requires additional freshwater. The basic problem with freshwater, as Marq de Villiers sardonically notes, "is that they're not making any more of it."[8] If Afghanistan expands its agricultural capacity in the coming years, doing so will require new irrigation projects. In turn, Afghan farmers must divert much of the water flowing through these new pipelines and canals away from some other downstream destination—Afghanistan's neighbors. Of particular concern for the present study is the Amu Darya River, which constitutes large portions of Afghanistan's northern borders with Tajikistan, Turkmenistan, and Uzbekistan. Competition over the Amu Darya and other transboundary rivers has already heightened tensions among these Central Asian states and, as Afghanistan's agricultural resurgence necessitates the capture of more of these scarce waters, competition with its upstream and downstream neighbors will increase. As Martin Kipping observes, "It is expected that Afghan water consumption will increase soon, as its rural population has few economic alternatives to irrigated agriculture besides poppy cropping. This will significantly reduce the flow of the Amu Darya, where competition over absolute water distribution is already intense."[9] Furthermore, as a 2002 report by the International Crisis Group (ICG) contends, "Not only

[6] USDA, "USDA at Work."
[7] Wollan, "Duplicating Afghanistan."
[8] Marq de Villiers, *Water: The Fate of Our Most Precious Resource* (Toronto: McClelland & Stewart, 2003), 8.
[9] Martin Kipping, "Can 'Integrated Water Resources Management' Silence Malthusian Concerns? The Case of Central Asia," *Water International* 33, no. 3 (2008): 309.

do [tensions over water in Central Asia] tend to provoke hostile rhetoric, but they have also prompted suggestions that the countries are willing to defend their interests by force if necessary."[10] Adding the ever-growing hydraulic needs of postwar Afghanistan into this volatile equation is only likely to heighten existing tensions.

We argue that what is best for Afghanistan—that is, expanding the country's capacity to grow traditional crops—may, in fact, have negative consequences for regional security in Central Asia as a whole. Therefore, from a policy level, we propose that a measured approach accounting for broader regional concerns is imperative for the United States and other international actors who are assisting in Afghanistan's recovery. Components in our proposals, discussed in greater detail below, include promoting the development of sustainable, less water-intensive crops in Afghanistan; counterbalancing Afghan agricultural projects with food aid and other assistance to neighboring states in Central Asia; and, perhaps most prominently, working to strengthen regional institutions to oversee the sharing of scarce water resources.

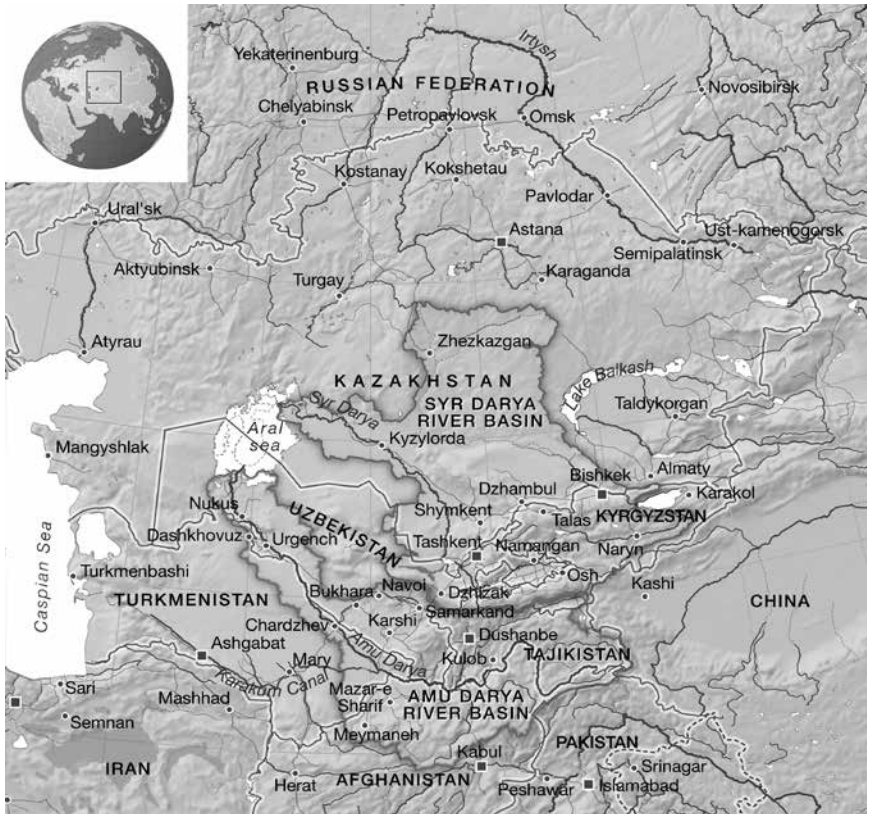
Existing Tensions over Water Scarcity in Central Asia

Central Asia is a predominantly arid region that historically has relied on vast irrigation networks to support agricultural development. Most of the vital freshwater in these states originates from the melting snows in the mountains of Kyrgyzstan and Tajikistan, which then flows downstream through Kazakhstan, Turkmenistan, and Uzbekistan via the Amu Darya and Syr Darya Rivers. In turn, both the Amu Darya and Syr Darya eventually flow into the Aral Sea, which forms a natural border between Kazakhstan and Uzbekistan.

Considered the world's fourth largest lake as recently as 1960, the Aral Sea today represents one of the world's foremost environmental catastrophes, leading some to refer to its depletion and degradation

[10] International Crisis Group (ICG), *Central Asia: Water and Conflict*, ICG Asia Report 34 (2002), http://www.crisisgroup.org/~/media/Files/asia/central-asia/Central%20Asia%20Water%20and%20Conflict.pdf.

Map 1. Central Asia and the region around the Aral Sea



Map by Hugo Ahlenius, Nordpil 2010, http://nordpil.com/go/portfolio/mapsgraphics/central-asia-aral-sea-and-surrounding/

as Central Asia's "quiet Chernobyl."[11] As the use of the Amu Darya and Syr Darya Rivers by Central Asian states has increased since the 1960 (an outgrowth of the Soviet Union's water-intensive efforts to transform the region into its so-called cotton belt), their inflows have been cut to a trickle. As a result, the Aral Sea has shrunk to less than 10 percent of its original size.[12] According to Rama S. Kumar, the environmental toll of this transformation includes extensive

[11] Trevor W. Tanton and Sonia Heaven, "Worsening of the Aral Basin Crisis: Can There Be a Solution?" *Journal of Water Resources Planning and Management* 125, no. 6 (1999): 363; and Rama Sampath Kumar, "Aral Sea: Environmental Tragedy in Central Asia," *Economic and Political Weekly* 37, no. 37 (2002): 3797.

[12] Philip Micklin and Nikolay V. Aladin, "Reclaiming the Aral Sea," *Scientific American*, April 2008, 64–71.

soil salinization, lack of freshwater, wind erosion, the collapse of the fishing industry, disruption of navigation, species loss, the desiccation of pasturelands, and numerous public health issues.[13] In turn, the intense interstate competition for the rivers that flow into the Aral Sea forms the basis for hydropolitical conflict in the region.

During the Soviet era, Moscow carefully managed and developed the Amu Darya and Syr Darya Rivers to ensure adequate irrigation for lucrative cotton crops in the downstream states of Turkmenistan and Uzbekistan. Kai Wegerich argues that the hydraulic system put in place by the Soviet Union "left a set of water allocations in Central Asia which favored the downstream riparian states Turkmenistan and Uzbekistan . . . and started to utilize Tajikistan as a water regulator, primarily through the construction of dams."[14] He goes on to note that any disputes between upstream and downstream interests in the Central Asian republics during this period were "subordinated to the central authority in Moscow, and to the greater interest of the USSR."[15] Water was exchanged freely across the Soviet Union's administrative borders. In essence, Kyrgyzstan and Tajikistan "produced" water (while benefitting from the hydropower generated by the reservoirs built within their territories), and Kazakhstan, Turkmenistan and Uzbekistan "consumed" water for agricultural purposes. In turn, during the winter months, the downstream states provided their upstream neighbors with coal and gas to generate power and heat without requiring the release of the water resource stored in those reservoirs.[16]

As the use of the Amu Darya and Syr Darya Rivers by Central Asian states has increased since the 1960 (an outgrowth of the Soviet Union's water-intensive efforts to transform the region into its so-called cotton belt), their inflows have been cut to a trickle.

[13] Kumar, "Aral Sea."
[14] Kai Wegerich, "Hydro-hegemony in the Amu Darya Basin," *Water Policy* 10, no. S2 (2008): 71.
[15] Ibid., 76.
[16] Johannes F. Linn, "The Impending Water Crisis in Central Asia: An Immediate Threat," Brookings Institute, 19 June 2008, http://www.brookings.edu/opinions/2008/0619_central_asia_linn.aspx.

The collapse of the Soviet Union in 1991, however, replaced these administrative borders with national borders. Now that Moscow was no longer in a position to play the role of "hydro-hegemon"[17] in Central Asia, it fell to these five newly sovereign, self-interested states to address the sharing of the Amu Darya and Syr Darya. Furthermore, as the ICG observes in its May 2002 report on water and conflict in Central Asia, "Rising nationalism and competition among the five Central Asia states has meant they have failed to come up with a viable regional approach to replace the Soviet system of management."[18] In fact, consumption continues to rise, and ongoing development projects along the Amu Darya and Syr Darya Rivers have emerged as points of contention among the Central Asian states. K. D. W. Nandalal and K. W. Hipel describe the emerging patterns of interaction as follows:

> An annual cycle of disputes has developed between the three downstream countries—Kazakhstan, Turkmenistan, and Uzbekistan, which are all heavy consumers of water for growing cotton, and the upstream nations—Kyrgyzstan and Tajikistan. The downstream countries require more water for their expanding agricultural sectors and rising populations, whereas the economically weaker upstream countries are trying to win more control over their resources and want to use more water for electricity generation and farming.[19]

P. L. Dash identifies similar trends, noting that these trends have created a dichotomy between upstream states that consider themselves "possessors" of the rivers and downstream states that rely on these waters as "users."[20] For instance, Uzbekistan—a downstream "user"—consumes nearly 50 percent of the water flowing down the Syr Darya annually. Upstream, Kyrgyzstan uses roughly 14 percent of the same Syr Darya waters. However, as a regional news service reported in 2008, "Both countries plan to expand lands devoted to

[17] Wegerich, "Hydro-hegemony."
[18] ICG, *Central Asia*.
[19] K. D. W. Nandalal and K. W. Hipel, "Strategic Decision Support for Resolving Conflict over Water Sharing among Countries along the Syr Darya River in the Aral Sea Basin," *Journal of Water Resources Planning and Management* 133, no. 4 (2007): 290.
[20] P. L. Dash, "Central Asian Republics: Discord over Riverine Resources," *Economic and Political Weekly* 38, no. 6 (2003): 522–24.

agriculture, which will inevitably lead to more complex issues of water management. This increasing demand for water happens while water supplies in the Syr Darya remains at the same level . . . ."[21] With no hydro-hegemon in place to manage these increasingly scarce freshwater resources, the potential for interstate disputes—including, in extreme instances, violent conflict—is significant.

War over Water?

Scholars have produced a sizeable body of research in the past few decades warning of impending "water wars"—that is, civil strife and interstate conflict resulting from water scarcity. Policy makers share these concerns. For instance, Wally N'dow, former director of the UN's Center for Human Establishments, made the following statement in March 1996: "I believe that if by 2010 great improvements are not undertaken to provide and save water, we'll have to face a monumental crisis. . . . Whereas the grounds for the last century's wars were oil, I am firmly convinced that many political and social conflicts of the twenty-first century will focus on water."[22] In fact, the metaphor that "water is the new oil" is common among both scholars and policy makers. As Sandra Postel asserts, water is "a strategic resource like oil, for which nations will compete fiercely as it becomes more scarce. And like oil, it is likely to lead to warfare."[23] In turn, Michael Klare offers a concise summary of the interstate water wars hypothesis in the following passage:

With no hydro-hegemon in place to manage these increasingly scarce freshwater resources, the potential for interstate disputes—including, in extreme instances, violent conflict—is significant.

> Because many key sources of water . . . are shared by two or more countries and because the states involved have rarely

[21] "Central Asia: Water Shortage Due to Lack of Regional Agreements, Prompt Decision-Making," Ferghana.ru, 15 July 2008, http://enews.ferghana.ru/article.php?id=2422.
[22] Larbi Bouguerra, *Water under Threat*, trans. Patrick Camiller (London: Zed Books, 2006), 65.
[23] Sandra Postel, *The Last Oasis: Facing Water Scarcity* (New York: W. W. Norton, 1992), 13.

> agreed on procedures for dividing up the available supply, disputes over access to contested resources will become increasingly heated and contentious. . . . Any increase in utilization by one country in the system will result in less water being available to the others—a situation that could lead to the outbreak of war.[24]

The Central Asian states have not yet resorted to full-scale war as a means to resolve their hydraulic differences, but small-scale transboundary disputes over water have already broken out in the region. For instance, farmers in Turkmenistan have constructed canals in recent years to divert Amu Darya water flowing along the Uzbek-Turkmen border in an effort to decrease dependence on Uzbek water delivery while simultaneously depriving Uzbek farmers in the river's delta of much needed water for irrigation. As farmers in both countries compete for increasingly scarce freshwater resources, Kipping observes that they "sometimes deliberately block drainage canals in order to assure minimum soil moisture for the following year."[25] While government officials from Uzbekistan and Turkmenistan have clashed over these ongoing patterns of "resource capture,"[26] the issue remains unresolved.

Dash offers another example of a regional dispute over water—ironically enough, a dispute over *too much* water rather than too little. During the winter months of 2000, Kyrgyzstan decided to capitalize on its upstream waters by opening up some of its reservoirs to generate additional hydroelectricity. The resulting winter flood inundated thousands of hectares of irrigated land and pastures in both Uzbekistan and Kazakhstan. Intense protests followed, particularly in Kazakhstan, as farmers feared the flood would damage the following year's crops.[27] As this pattern has repeated itself in subsequent years, the ICG observes that Uzbekistan has responded by carrying out military exercises that "look suspiciously like practice runs at captur-

[24] Michael T. Klare, *Resource Wars: The New Landscape of Global Conflict* (New York: Henry Holt, 2001), 139–40.
[25] Kipping, "Malthusian Concerns," 310.
[26] Thomas F. Homer-Dixon, *Environment, Scarcity, and Violence* (Princeton, NJ: Princeton University Press, 1999).
[27] Dash, "Central Asian Republics," 523.

ing the Toktogul reservoir" in Kyrgyzstan.[28] Kipping notes that, while similar reports of transboundary skirmishes between local communities in the region have emerged during the post-Soviet era, "competition over irrigation water has not yet led to interstate violence."[29] As populations grow, demand increases, and supplies dwindle, however, scholars and policy makers alike have questioned whether the states of Central Asia can sustain these relatively peaceful relations.

Taking a step back, what are the main points of dispute and, in turn, barriers to hydraulic cooperation among the Central Asian states? The ICG identifies four key areas of water-related tension among these countries in its 2002 report:

- lack of coherent water management
- failure to abide by or adapt water quotas
- nonimplemented and untimely barter agreements and payments
- uncertainty over future infrastructure plans[30]

We will discuss lack of coherent water management in more detail in the next section. With regards to the failure to abide by water quotas, the countries initially attempted to maintain the quota system established during the Soviet era upon gaining independence. However, water-monitoring facilities in Kyrgyzstan and Tajikistan have fallen into disrepair as a result of economic and political turmoil in those countries. The result, according to the ICG, is that "Turkmenistan is using too much water to the detriment of Uzbekistan, which in turn has been accused by Kazakhstan of taking more than its share. Kyrgyzstan and Tajikistan say that the three downstream countries are all exceeding quotas. Even within Uzbekistan, provinces have accused one another of using too much water."[31] Moving on to the ICG's third point of contention, barter payments typically take the form of energy resources traded to the upstream riparians by

[28] ICG, *Central Asia*, ii.
[29] Kipping, "Malthusian Concerns," 310.
[30] ICG, *Central Asia*.
[31] Ibid.

their downstream neighbors in exchange for the upstream countries agreeing not to overutilize their riverine resources in the generation of hydroelectric power during the winter months. Failure to fulfill these barter agreements in a timely manner, however, frequently gives rise to the winter flooding and resultant political disputes described above. Finally, uncertainty over future dam building and irrigation plans in the region continues to stymie efforts at cooperative management. Nevertheless, these points of dispute have yet to give rise to violent interstate conflict in Central Asia. Johannes Linn notes, however, that although these countries have thus far avoided war over water resources, "their relations have been strained, especially between Tajikistan and Kyrgyz Republic on the one side and Uzbekistan on the other."[32] In turn, the introduction of Afghanistan—intent on an agricultural resurgence and in need of freshwater to accomplish that goal—into the competition for scarce resources is likely to exacerbate these preexisting hydropolitical tensions.

A Challenger Appears: Afghanistan

The Interstate Commission for Water Coordination of Central Asia (ICWC), a regional organization created in 1992 to manage water sharing in post-Soviet Central Asia, describes Afghanistan's future water use as a "destabilizing factor" in its overview of regional water challenges.[33] As Afghanistan's agricultural revival proceeds in the coming years, Afghan farmers will require additional water for their crops. In turn, this will place additional stress on transboundary waters. As Mujib Mashal observes, "Water is key to strengthening the foundations of Afghanistan's mainly agricultural economy. But only about 5 percent of the massive international investment and aid in the past decade went to the water sector, according to the UN report. And, critics say, too much of that went to ad hoc small dams and schemes that had no long-term vision."[34] While Afghans

[32] Linn, "Impending Water Crisis."
[33] Interstate Commission for Water Coordination of Central Asia (ICWC), "Main Challenges Facing the Region Regarding Water Issues," http://www.icwc-aral.uz/problem.htm.
[34] Mujib Mashal, "What Iran and Pakistan Want from the Afghans: Water," *Time*, 2 December 2012, http://world.time.com/2012/12/02/what-iran-and-pakistan-want-from-the-afghans-water/.

have enough water at present to meet their needs, experts estimate that population growth and diminished supply will result in a 50 percent decline in the availability of freshwater per capita in the next three decades.[35] Furthermore, farmers in many Afghan provinces are currently unable to fully utilize their water resources due to the country's inadequate hydraulic infrastructure, much of which is dilapidated after decades of conflict and neglect. Intrastate competition for these freshwater resources has already intensified. Oxfam International estimated in 2010 that a staggering 43 percent of local conflicts in rural and urban communities in Afghanistan are now over water. According to Oxfam policy officer Ashley Jackson, "Disputes over these scarce resources lead to violence and even, in some instances, fuel the greater conflict."[36]

Failure to fulfill these barter agreements in a timely manner, however, frequently gives rise to winter flooding and resultant political disputes.

In northern Afghan provinces such as Badghis—known for its pistachio orchards—farmers will need to divert water from transboundary sources like the Amu Darya. This raises the question of how much water Afghanistan will need in the decades ahead. A 2004 World Bank report estimates that a 15 percent increase in irrigated land area in the Amu Darya basin would require a 20 percent increase in water usage relative to Afghanistan's withdrawal levels during the 1980s.[37] While the World Bank report characterizes the impact of increased usage of the Amu Darya in northern Afghanistan on downstream riparians Uzbekistan and Turkmenistan as "negligible" and "likely only to be felt in dry years,"[38] we find several faults with this conclusion. First, since the report's publication in

[35] Ibid.

[36] John Vidal, "Kabul Faces Severe Water Crisis," Guardian (London), 19 July 2010, http://www.guardian.co.uk/world/2010/jul/19/kabul-faces-severe-water-crisis.

[37] Masood Ahmad and Mahwash Wasiq, *Water Resource Development in Northern Afghanistan and Its Implications for Amu Darya Basin*, World Bank Working Paper 36 (Washington, DC: World Bank, 2004), 30, http://elibrary.worldbank.org/doi/pdf/10.1596/0-8213-5890-1.

[38] Ibid., 3.

2004—and particularly since 2009—the United States and other international actors have placed greater emphasis on the rehabilitation and expansion of Afghan agriculture. The expansion of cultivated land in northern Afghanistan already exceeds many of the report's projections, and this trend is likely to continue into the future. Furthermore, the World Bank's conclusions are based, in part, on the hopeful assumption that Uzbekistan and Turkmenistan would improve their own water management practices, offsetting the additional withdrawals made by Afghanistan upstream. A decade later, however, infrastructure and water management improvements by the downstream riparians are minimal at best. In addition, the assertion that Uzbekistan and Turkmenistan would only feel the impact of Afghanistan's increased usage of the Amu Darya during dry years is of little solace as climate change creates hotter, drier seasons in much of the world as global warming grinds on. Finally, the report fails to consider that even the *perception* by its downstream neighbors that Afghanistan is taking more than its fair share of the Amu Darya and other shared transboundary water resources could heighten tensions in the region. Again, a Malthusian logic ensues. Increased demand for freshwater leads to increased interstate competition, creating tensions with both upstream states (who are perceived as withdrawing too much water from transboundary sources) and downstream states (who feel they are not left with enough water after Afghanistan withdraws its share). Furthermore, as water becomes increasingly scarce, the likelihood of *intrastate* conflict in downstream riparians increases, as groups within these societies compete to control access to dwindling freshwater resources. In summary, increased competition resulting from Afghanistan's growing demand for water opens the door to potential conflict, both within and among the states of Central Asia.

Navigating the Troubled Waters of Afghanistan's Agricultural Revival

In addition to training farmers in modern agricultural practices, distributing supplies, and repairing dilapidated hydraulic infrastructure, what kinds of policies should the United States and other interna-

tional partners pursue in Afghanistan? One obvious answer is to avoid the Soviet Union's mistake of promoting water-intensive crops like cotton in Central Asia and instead channel aid dollars and technical support toward encouraging sustainable crops that require less water to thrive. While the market value of staple crops like wheat and maize is somewhat lower than cotton and rice, wheat and maize are also far less "thirsty" crops. It is also vital that international stakeholders endorse crops appropriate for both the Afghan climate and the technical capabilities of Afghan farmers. The United States failed to account for both concerns when USDA spent $34.4 million on an ill-fated 2010 project aimed at making soybeans an Afghan dietary staple. Not only was the country's climate a decidedly poor fit for soybeans, but the traditional Afghan farming culture was unprepared to engage in large-scale production. Furthermore, as Alexander Cohen and James Arkin observe, USDA failed to realize that Afghans "don't like the taste of the soy-processed foods."[39] In terms of export-oriented crops, Afghanistan's production of high-value fruits and nuts—almonds, apricots, pistachios, pomegranates, and raisins—has rebounded significantly since 2002 and represents a significant source of potential income for the country.[40] That said, any future projects aimed at expanding the cultivation of these high-value crops (which also require considerable freshwater resources) must be balanced against the need to produce less thirsty, albeit lower-value, crops such as wheat and maize for domestic consumption.

In addition to promoting appropriate crops, international stakeholders can also diminish competition over transboundary freshwater resources by providing corresponding "side payments" in the form of food aid to those countries negatively impacted by Afghanistan's increased withdrawals. Yet, perhaps the most promising route to resolving future conflicts lies in strengthening regional water-sharing institutions. With regard to water management, Afghanistan and its Central Asian neighbors confront the classic "tragedy of the com-

[39] Alexander Cohen and James Arkin, "Afghans Don't Like Tofu, Either," *Foreign Policy*, 25 July 2014, www.foreignpolicy.com/articles/2014/07/25/afghans_don_t_like_tofu_either_soybeans_afghanistan.

[40] USAID, "Agriculture (Afghanistan)," 3 September 2014, http://www.usaid.gov/afghanistan/agriculture.

mons."[41] That is, individual actors engaging in self-interested, rational behavior in the short run (i.e., exploiting transboundary freshwater resources) run the risk of creating negative consequences for the whole in the long run (i.e., the depletion of those freshwater resources). In these instances, strong institutions capable of effectively coordinating state behavior and settling disputes are central to preserving a scarce resource and preventing conflict.[42]

What kinds of institutions currently exist in Central Asia to manage contentious freshwater resources? The institutional cornerstone of transboundary water management in the region is the ICWC. The organization describes its central mission as preventing conflicts and other "serious complications" in regional water resources management.[43] To this end, the ICWC is intended to monitor and maintain water-sharing quotas, oversee the development of the Amu Darya and Syr Darya Rivers, construct new water-related infrastructure (e.g., dams or reservoirs), promote regional economic integration, and provide a forum to peacefully settle interstate disputes. However, in its May 2002 report on water and conflict in Central Asia, the ICG makes the following observations:

While the market value of staple crops like wheat and maize is somewhat lower than cotton and rice, wheat and maize are also far less "thirsty" crops. It is also vital that international stakeholders endorse crops appropriate for both the Afghan climate and the technical capabilities of Afghan farmers.

> The Interstate [Commission for Water] Coordination (ICWC) that was set up in 1992 has failed to take into account changing political and economic relations. It is an intergovernmental body with little transparency that focuses almost exclusively on the division of water. There is no rep-

[41] Garrett Hardin, "The Tragedy of the Commons," *Science* 162, no. 3859 (1968): 1243–48.
[42] Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press, 1990).
[43] ICWC, "Main Challenges."

> resentation from agricultural or industrial consumers, nongovernmental organizations, or other parties. Management is dominated by officials from Uzbekistan, leading to suspicions that it favors that country's national interests. This has contributed to a lack of political commitment by other countries to the commission, resulting in a serious shortage of funds.[44]

In turn, the ICWC has achieved relatively little since its inception. As Tobias Siegfried argues, "A mixture of regional, national, and interstate institutions now handles allocation decisions, which used to be centrally administered during Soviet times. It should come as no surprise that water and energy allocation among the various sectors and users is not efficient."[45] Thomas Bernauer and Siegfried expand on these difficulties, arguing that while interstate compliance with water-sharing institutions in Central Asia has been relatively high, the actual performance of these agreements has been very low.[46] In other words, although the Central Asian states are, by and large, complying with the terms set forth by the ICWC and other regional agreements, the agreements themselves simply are not up to the task of resolving water-related disputes. Although additional treaties and bilateral agreements have emerged in the region since 1992, effective cooperation remains elusive.

Of Afghanistan's four major river basins, only the Helmand River—shared with neighboring Iran—has an interstate water-sharing agreement in place, and this agreement is characterized by weak compliance.[47] Afghanistan is not a member of the ICWC, and no bilateral treaties exist to manage the Amu Darya and its tributaries

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[44] ICG, *Central Asia*.

[45] Tobias Siegfried, "Water and Energy Conflict in Central Asia," *State of the Planet* (blog), 18 August 2009, http://blogs.ei.columbia.edu/water/2009/08/18/water-and-energy-conflict-in-central-asia/.

[46] Thomas Bernauer and Tobias Seigfried, "Compliance and Performance in International Water Agreements: The Case of the Naryn/Syr Darya Basin," *Global Governance* 14 (2008): 479–501.

[47] Margaret J. Vick, "Sharing Central Asia's Waters: The Case of Afghanistan," *International Water Law Project Blog*, 19 January 2013, http://www.internationalwaterlaw.org/blog/2013/01/19/sharing-central-asias-waters-the-case-of-afghanistan/; and Mashal, "What Iran and Pakistan Want."

with Tajikistan, Uzbekistan, or Turkmenistan. As regional water use increases and scarcity results, Afghanistan will find itself resolving disputes with its upstream and downstream neighbors on an ad hoc basis—not a scenario conducive to effective, equitable solutions. The United States and other international partners must work to strengthen regional water-sharing institutions in Central Asia, whether that involves crafting new agreements or bringing Afghanistan into a restructured ICWC. Further disputes over water management are almost certain to occur in the years ahead; experiences from transboundary river basins around the globe serve as a testament to that fact. Effective regional institutions, however, have the capacity to prevent these disputes from escalating to the level of interstate conflict.[48] Furthermore, as Margaret Vick observes, "The economic viability of Afghanistan depends on protection from floods and drought, adequate domestic supply, reliable irrigation, and power. All can be advanced through water-sharing agreements with neighboring states."[49]

Of Afghanistan's four major river basins, only the Helmand River—shared with neighboring Iran—has an interstate water-sharing agreement in place, and this agreement is characterized by weak compliance.

How can the United States and its international partners work to strengthen these institutions in Central Asia? The ICG's 2002 report recommends four reforms of the ICWC that represent a promising start:

- Improve transparency and accountability in the ICWC's decision-making process, budgets, and policies.
- Widen participation by including agricultural and industrial consumers, as well as nongovernmental organizations.

[48] Jaroslav Tir and Douglas M. Stinnett, "Weathering Climate Change: Can Institutions Mitigate International Water Conflict?" *Journal of Peace Research* 49, no. 1 (2012): 211–25.
[49] Vick, "Sharing Central Asia's Waters."

- Increase the ICWC's power to monitor water consumption, enforce quotas, and impose sanctions.
- Reform the management structure to make it more representative of both upstream and downstream member states.[50]

Of course, these reforms would require that the member states put aside self-interest and entrust the ICWC with significantly more authority—no easy task, to say the least. To ease such concerns and bring regional stakeholders to the table, the ICG also recommends strengthening the water/energy bartering system among member states along the Amu Darya and Syr Darya, offsetting at least some potential costs of collaboration.

Conclusion

While Afghanistan's future following the scheduled exit of most international military forces at the end of 2014 is uncertain, there are three essential truths upon which we can rely. First, political stability and sustainable economic development are closely linked to Afghanistan's capacity to shift away from poppy cultivation and toward legitimate agriculture. This transition would not only rob the Taliban insurgency of a key source of funding but also would lay the groundwork for future economic growth in one of the world's poorest countries. Second, Afghanistan's agricultural revival will require additional irrigation, and farmers will, in turn, need to withdraw at least a portion of the freshwater for these irrigation projects from transboundary sources like the Amu Darya. Third, as Afghanistan's freshwater needs rise in the years ahead—in conjunction with growing populations and dwindling supply as a result of climate change—competition for these scarce transboundary resources with upstream and downstream neighbors in Central Asia will intensify. As competition escalates in a political environment with no effective regional institutions in place to settle disputes, so too does the likelihood of interstate hostility—and, along with it, violent conflict. Therefore, as the United States and U.S.-led organizations like the

[50] ICG, *Central Asia*.

World Bank allot funds and approve projects aimed at Afghanistan's agricultural revival in the coming years, it is crucial that they remain mindful of the broader regional hydropolitics of Central Asia while crafting policy. This includes not only strengthening existing regional water-sharing institutions and prioritizing water-efficient crops, but perhaps even going so far as to provide food aid and other assistance to Central Asian states to offset the deleterious effects of Afghanistan's increased freshwater withdrawals. Failure to account for the transnational repercussions of Afghanistan's agricultural revival has the potential to create an entirely new set of problems for a country that has faced a cycle of extreme violence since 1978.

Given the poor performance of the Afghan government over the past decade, the effective management of a domestic agricultural program with a strategic intent of maintaining regional peace and security might seem a tall—or perhaps even impossible—order. However, there are grounds for tempered optimism.

First, it is important to understand that a significant reduction in the ISAF footprint may reduce some of the sources of local grievance that help to sustain the Taliban. The Taliban rely heavily on a narrative that paints the government in Kabul as corrupt lackeys of apostate foreigners. Once those foreigners leave, that narrative begins to unravel. With a reduction in conflict, the process of rebuilding and economic development can proceed at a more deliberate pace.

Second, over that last half decade there has been significant improvement in local security as a result of the Village Stability Operations (VSO)[51] concept that has been implemented by various ISAF units (mostly American forces). As VSO efforts mature, the

[51] For more information on VSO, see Mark L. Brown Jr., "Village Stability Operations: An Historical Perspective from Vietnam to Afghanistan," *Small Wars Journal* (28 March 2013), http://smallwarsjournal.com/jrnl/art/village-stability-operations-an-historical-perspective-from-vietnam-to-afghanistan; Col Ty Connett, USA, and Col Bob Cassidy, USA, "Village Stability Operations: More than Village Defense," *Special Warfare* (July–September 2011), http://www.soc.mil/swcs/swmag/archive/SW2403/SW2403VillageStabilityOperations_MoreThanVillageDefense.html; and Octavian Manea, "Village Stability Operations and the Future of the American Way of War," *Small Wars Journal* (6 February 2014), http://smallwarsjournal.com/jrnl/art/village-stability operations-and-the-future-of-the-american-way-of-war.

reduction of international forces does not mean that the Taliban will simply return to power due to a lack of local security. Readers must recall that the Taliban once ruled Afghanistan and the memory of their coercive and oppressive authoritarian intolerance will influence the future more strongly than it does the present.

Third, the areas of Afghanistan that will require effective water coordination between local, national, and neighboring authorities are primarily located in the most stable areas of the country (the north and west) and out of the more violence-prone Pashtun regions. Finally, the ineffective, highly corrupt, and incoherent policies of Afghan President Hamid Karzai will soon be replaced. We have no illusion that Afghan politics will stage a remarkable turnaround under his successor; however, with a change of leadership, the possibility for improvement will exist, and it is in all stakeholders' interests to continue nudging Afghanistan toward a better future.

Given the poor performance of the Afghan government over the past decade, the effective management of a domestic agricultural program with a strategic intent of maintaining regional peace and security might seem a tall—or perhaps even impossible—order.

In the late 1970s, tunnels linking South Korea and North Korea were discovered, creating a pathway for the invasion of thousands of North Korean soldiers. The closed-off tunnels have since become tourist attractions, their entrances marked by pro-unification works, such as this statue titled *This One Earth*. Photo by Justin Matthews at urbanbrat.wordpress.com.

China and the Future of Korean Unification

by Brian J. Ellison

While much has been said of China's treatment of North Korea as a client state, and even how their relationship has deteriorated a bit in recent years with the North's continued provocation of the South, little has been said of where Chinese policy toward the Korean Peninsula would turn in the event of eventual unification between the North and South. There is a common view that the People's Republic of China (PRC) wants to continue current relations with Seoul and Pyongyang. This view, as perpetuated, could create a vacuum of beliefs that lead to miscalculation when projected in a crisis.

Presenting alternative possibilities to the course of Chinese policy for the Koreas will give U.S. policy planners a strategic-level perspective to consider. The primary conclusions of this article are threefold. First, there is a high likelihood that, given the possibility of a conflict between the Koreas in which unification were at stake, the People's Liberation Army (PLA) would intervene. Second, this rationale is based on both the desire to secure North Korea's nuclear weapons from international proliferation, as well as the fact that China would likely perceive its territorial integrity to be at stake. Third, while China might attempt to shape the outcome of a unification process, there is no evidence to suggest that the PRC has the intention of disrupting an outcome after the fact.[1]

The subject of Korean unification is vital to U.S. military planning considerations for a number of reasons. It is directly conse-

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[1] For more on the political and diplomatic balance that Beijing has attempted on this subject, see John S. Park, "Beijing's Sunshine Policy with Chinese Characteristics," in *US-China Relations and Korean Unification*, ed., Choi Jinwook (Seoul: Korea Institute for Unification, 2011), 64–99.

quential to the upcoming changes to command and control on the Korean Peninsula with the operational control (OPCON) transfer in 2015, when the United States will relinquish wartime control over all forces in Korea. With the establishment of the Korea Command (KORCOM), the United States will become a supporting force for the first time since the Korean War. The government of the Republic of Korea (ROK) has been historically reticent to discuss the issue of third-party intervention in the event of a Korean conflict.[2] Moreover, continued provocations by the North have perpetuated the possibility—not the likelihood—that war could occur.

This article first establishes the strategic challenge of unification in Northeast Asia. Second, in order to evaluate future courses of action, it discusses Chinese interests on the Korean Peninsula, first and foremost being the need to maintain stability. This also includes discussions of the Chinese economic model in relation to unification, Beijing's troubled relations with Pyongyang, the approaching U.S.-ROK OPCON transfer in 2015, and some further considerations about Chinese courses of action. Finally, the article evaluates potential unification courses vis-à-vis China.

The Strategic Problem of Unification

There is a phrase in Korean—*Tong Il* (통일)—which translates to "the great reunification dream."[3] For a number of centuries, it was very difficult to unify the Korean Peninsula, until the kingdom of Silla did so in the mid-600s AD.[4] This unification lasted, even in times of occupation, until 1948. As a consequential regional power in the early days of the Cold War, China deliberately had a hand on the peninsula due to its weariness of instability and encroachment.

[2] This subject has always been taboo with the South Korean government.

[3] Boye Lafayette De Mente, *The Korean Mind* (Tokyo: Tuttle Publishing, 1998), 409–10.

[4] The Silla (also known as Shilla) Dynasty was a Korean kingdom with origins in the southeast around modern-day Pusan. Under King Muyeol (654–661 AD), Silla allied militarily with Tang (China) in a series of attacks and captured the kingdom of Paekche. With this victory, Silla accepted Chinese rule but then convinced China to move its sights to the kingdom of Koguryo. After more than a decade of war, the Silla were victorious and unified the Korean Peninsula by 668 AD. See *Encyclopedia of World History: The Expanding World, 600 CE to 1450*, vol. 2, eds., Marsha E. Ackermann et al. (New York: Golson Books, 2008).

As history had shown, the region was often at the crossroads of strategic conflict. Beijing's fears were salient, to be sure.[5]

Today, the strategic landscape is much different but not necessarily any more predictable. China surpassed the United States as the world's largest economy on 8 October 2014, coming well before the Organization for Economic Co-operation and Developement's previous assessment of 2016.[6] China is South Korea's number one trading partner and North Korea's number one source of aid. Continued stability, from China's perspective, requires a delicate balance between forces with historic precedent for conflict. It is this history, along with contemporary economic and security challenges, with which China approaches its policy toward the peninsula. Unification is an issue that China considers consequential to its security, relating to the interest of territorial integrity and the presence of U.S. forces close to its border.

With the establishment of the Korea Command (KORCOM), the United States will become a supporting force for the first time since the Korean War.

A fundamental assumption that persists in the online[7] and academic communities—especially when it comes to third-party intervention in a North Korean collapse—is that a *unification of the*

[5] For a good discussion of the Chinese sense of encroachment leading up to the Korean War, see T. R. Fehrenback, *This Kind of War* (Washington, DC: Brassey's, 1998), 186–89.
[6] This is based on purchasing-power parity. See International Monetary Fund, World Economic Outlook Database, October 2014, http://tiny.cc/e5l0qx; and Organization for Economic Co-operation and Development (OECD), *Looking to 2060: Long-Term Global Growth Prospects*, OECD Economic Policy Papers no. 3, November 2012.
[7] See, for example, North Korea Leadership Watch at http://nkleadershipwatch.wordpress.com, *KPA Journal* at http://www.kpajournal.com, and North Korean Economy Watch at http://www.nkeconwatch.com.

peninsula would be disadvantageous to China.[8] The assumption that Beijing would not benefit from unification is not without merit, based on the historical record. First, China's postrevolutionary period was immediately characterized by conflict on the Korean Peninsula, in which the Communist regime's hold on power was threatened with instability. Second, Beijing's entry into the Korean conflict was primarily based on the fear of U.S. encroachment.[9] Third—and central in the context of present geopolitics in Northeast Asia—Beijing has economically supported Pyongyang's deficit of food and energy supplies for so long that the loss of influence could be both strategic and long term, particularly when securing its borders from outside influence, namely the U.S. military on the Korean Peninsula.[10]

Unification is an issue that China considers consequential to its security, relating to the interest of territorial integrity and the presence of U.S. forces close to its border.

Chinese Interests on the Korean Peninsula

Above all, Beijing's objective on the Korean Peninsula is to maintain the status quo because the PRC sees the peninsula's relative stability

[8] A relatively recent report published by the Senate Foreign Relations Committee cited several points supporting this. See *China's Impact on Korean Peninsula Unification and Questions for the Senate*, a Minority Staff Report prepared for the use of the Committee on Foreign Relations, U.S. Senate, 112th Congress, 11 December 2012. The study emphasized historical geographical claims of China on the Korean Peninsula, as well as the sense that unification could eliminate the buffer that China enjoys between its sovereign borders (the Yalu River and North Korea) and the Western-occupied southern portion of the peninsula. As a result, this would make China's territorial integrity more vulnerable. Historically, the Korean Peninsula was an invasion route for exogenous powers. Such was the case with Japan in the First Sino-Japanese War in 1894.

[9] This encroachment was also in the context of how the Chinese Communist Party (CCP, also known as the CPC or Communist Party of China) leadership approached countering the United States on multiple fronts. They believed that, while a U.S. invasion of the Chinese mainland was improbable in the short term, military conflict with the United States was inevitable in the long term. See Chen Jian, *China's Road to the Korean War* (New York: Columbia University Press, 1994), 92–96.

[10] For a history of the Sino–North Korean relationship, see Samuel S. Kim and Tai Lee Hwan, eds., *North Korea and Northeast Asia* (Lanham, MD: Rowman & Littlefield, 2002).

to be among its core interests.[11] Sustaining the Kim family regime, through direct (economic) and indirect means (e.g., its veto power in the United Nations Security Council [UNSC]), has furthered this goal, even as Beijing has pulled back open support in recent years in protest over the nuclear program.[12] The status of forces on the Korean Peninsula is a particularly sensitive issue with China, and the increase in forces would likely reinforce negative sentiment. If U.S. forces were present north of the demilitarized zone (DMZ) in a crisis, the security dynamic of the region would be tested in a way that China has not seen in six decades. As its participation in the six-party talks suggests, as well as its recent vote for sanctions against the North in the UNSC, China's policy does not support the continuation of weapons of mass destruction (WMD) programs on the peninsula. Chinese behavior on foreign policy, however, will not push too hard on the issue because of its behavioral understanding of the concept of sovereignty.[13] Additionally, Beijing's leaders have been inconsistent in their responses to periodic provocations by the North (against both the South and the United

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[11] Fei-Ling Wang addresses various aspects of this in a recent Korean Institute for National Unification paper. See Fei-Ling Wang, "Status Quo Reassessed: China's Shifting Views on Korean Unification," in *US-China Relations and Korean Unification*, ed., Choi Jinwook (Seoul: Korea Institute for Unification, 2011), 129–85. Bates Gill devotes a section of his book on China's new "security diplomacy" to this tendency and underscores Beijing's preference for a "regional security mechanism." See Bates Gill, *Rising Star: China's New Security Diplomacy* (Washington, DC: Brookings Institution Press, 2007), 53–58.

[12] Ken Gause addresses the economic sides of this in his recent book on Korean leadership. See Ken E. Gause, *North Korea Under Kim Chong-il: Power, Politics, and Prospects for Change* (Praeger Security International, 2011), 127–28.

[13] For a Chinese perspective on the understanding of sovereignty as it relates to foreign policy, see Wu Xinbo, "Four Contradictions Constraining China's Foreign Policy Behavior," in *Chinese Foreign Policy*, ed., Suisheng Zhao (Armonk, New York: M. E. Sharpe, 2004), 58–61.

States) in its near seas and geopolitical sphere.[14] Such occurrences not only threaten order and security on the peninsula, but the reverberating effects could draw in other regional actors, not least of which would be China. Certainly, in a North Korean collapse—the most often discussed and most potentially dire contingency on the peninsula—China would be greatly concerned about some immediate security and long-term strategic consequences.

The calculus that Beijing will employ in measuring whether its policy toward the Korean Peninsula remains static or changes considerably will depend almost entirely on the effect any policy would have on its so-called "core interests."[15] These include the following concerns:

- preserving the Chinese Communist Party's (CCP) hold on power and, within this context, internal stability;[16]
- securing China's perceived sovereign independence, to include territorial integrity and national unity; and
- sustaining its economic growth and stability, especially as they relate to social development.

These three interests will likely all have a bearing on China's policy calculation toward the peninsula. Part of China's historical sensitivity about the peninsula has to do with its territorial integrity vis-à-vis the conception of sovereignty.[17] If a Korean crisis invites a

[14] For example, following the sinking of the ROKS *Cheonan* (PCC 772), China's response was supportive of Pyongyang at first, followed later by acceptance of the findings by the "After Delay, China Calls *Cheonan* a 'Tragedy,'" *Korea JoongAng Daily*, 23 April 2010. Following the North Korean shelling of Yeonpyong Do (YP-Do) in November 2010, Beijing did not condemn North Korea but was also in favor of resumption of the six-party talks.

[15] CNA's China Studies Division has written a considerable amount on this subject and, in fact, tracked the evolution and derivation of the concept. See Thomas J. Bickford with Heidi A. Holz and Frederic Vellucci Jr., *Uncertain Waters: Thinking About China's Emergence as a Maritime Power*, CNA China Studies, September 2011, 15–16. Xi Jinping has noted Chinese core interests in the context of China's relationship with the United States. See for instance, Edward Wong, "Chinese Vice President Urges U.S. to Respect 'Core Interests'," *New York Times*, 15 February 2012, http://www.nytimes.com/2012/02/16/world/asia/vice-president-xi-jinping-of-china-urges-united-states-to-respect-core-interests.html?_r=0.

[16] All three of these points are paraphrased from the CNA report cited above and not translated by this author directly from an original Chinese language document.

[17] For more on the Chinese concept of sovereignty, see Wu, "Four Contradictions," 58–61.

heightened threat perception to Chinese territorial integrity, policy will reflect this. Likewise, if a crisis has any effect on the viability of the CCP or of Chinese economic interests in the region, Beijing's policy will also respond.

A Stable Korean Peninsula

Regardless, if unification is a long-term prospect, Beijing's primary concern about the peninsula will remain stability.[18] This begs the question of *whether China would be willing to trade short-term instability for long-term stability and the possibility of increased influence.* While China has a history of military confrontation with its neighbors, CCP leaders generally do not advocate conflict because of the sensitivity of security near its borders while it is still growing economically. That is, the instability of regions around China could serve to foment greater instability at home, thus ruining Beijing's economic aspirations before they could be fully realized.

While China believes that the Korean Peninsula's best course is relative stability, there are situations, including conflict, in which the PLA could be forced to play a role to preserve the stability.[19] It is in this context, however, that the PRC is forced to endure stability with a price. This includes a North Korean regime—with which Beijing has maintained relatively strong and consistent diplomatic and economic ties for the last several decades[20]—that has continued to pursue its nuclear program despite China's pressure on the Kim regime.

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[18] For a semi-official view from the Institute for Strategic Studies at the PLA's National Defense University, see LtCol Lu Yin, "The Security Situation on the Korean Peninsula and China's Policy Choice," in *International Strategic Situation and China's National Security* (Beijing: Current Affairs Press, 2012), 109–35.

[19] For a good description of this rationale, see James Dobbins et al., *Conflict with China: Prospects, Consequences, and Strategies for Deterrence*, Rand Occasional Paper (Santa Monica, CA: Rand, 2011), 2: "China meanwhile would view the insertion of U.S. and Republic of Korea (ROK) forces north of the DMZ with concern, and might move its own forces in, if it had not already begun to do so, both to contain the disorder and preempt a ROK/U.S. takeover of the entire country."

[20] Sino–North Korean relations are still derived from, if not driven by, the Sino–North Korean Mutual Aid and Cooperation Friendship Treaty (朝苏友好合作互助条约). North Korea's inability to open itself economically, as well as the series of sanctions placed on it because of its nuclear program, has created a patron-client relationship more than one of economic interdependence.

The volatility of the regime in Pyongyang, periodic food shortages, and other internal crises have brought the Democratic People's Republic of Korea's (DPRK's) survival into question on a number of occasions. Additionally, North Korea's provocations of the South, especially in the West Sea, have called into question whether Pyongyang has sought a conflict with the South to draw in greater Chinese support.[21] Whether or not there have been discussions of this at high bilateral levels, China has continued its relationship with the North (at arm's length at times), in place of other alternatives, such as becoming closer with the South. This measured policy suggests that Beijing's calculus regarding the Korean Peninsula, as it is presently, favors the status quo as opposed to the alternative possibilities, which could include the U.S. military even closer to its doorstep.[22]

While China believes that the Korean Peninsula's best course is relative stability, there are situations, including conflict, in which the PLA could be forced to play a role to preserve the stability.

As the situation on the peninsula is not static, neither are Chinese interests. They wax and wane, as state interests do, sometimes quickly and sometimes slowly. Although rooted in significant history and great power upheaval, Chinese interests on the peninsula could change, and these changes may or may not align with U.S. and South Korean interests. In the chance that the Chinese align with current U.S. and ROK interests, Beijing may no longer see strategic value in propping up North Korea. Conversely, there are no signs to suggest

[21] The artillery attack of YP-Do in November 2010 and the sinking of the ROK's *Cheonan* off the west coast of Baengnyeong Do in March 2010 are the most extreme of these provocations. According to Representative Chung Hee-soo of the ROK's parliament, data from the ROK–Joint Chiefs of Staff shows that North Korea has violated the Northern Limit Line a total of 338 times since 2001. Apparently, this includes 113 violations by North Korean patrol boats and 225 intrusions by fishing boats from the North. See "NK Vessels Violate Sea Border 338 Times during Last 10 Years," *Korea Times*, 4 October 2012.

[22] For more information, see *The China-North Korea Relationship*, Council on Foreign Relations, 22 August 2014, http://www.cfr.org/china/china-north-korea-relationship/p11097.

a retreat from the balance that China currently maintains between attempting to promote economic reform with Pyongyang, diplomacy on its nuclear program, and vocal adversity to the militarization of the region by the United States, Japan, and South Korea.[23]

Unification and the Chinese Economic Model

The prospect of Korean unification—while potentially devastating to the economy of the ROK—is of interest to Chinese economists.[24] While Seoul would be faced with absorbing the majority of 25 million North Koreans, Beijing could then open trade to a single Korean economy, which would be gasping for support from Chinese banks, who would begin lending overnight. The demand for capital investment, stemming from newly available land in the North, could far outstretch the South's ability to provide, and thus Chinese currency would quickly be sought. This is an all-too-perfect scenario for Beijing but one that is relevant to how China might view the Korean Peninsula in years to come.

While the future of the PRC's disposition in Northeast Asia is uncertain, it is unlikely that China will seek a confrontational relationship with the ROK. While some issues (not the least of which is fishing rights in the West Sea) could derail a peaceful bilateral relationship in the future, Seoul and Beijing will more likely seek a close, economically beneficial, and symbiotic relationship.[25] The long-term costs of maintaining a relationship of patronage and disproportionate burden sharing with Pyongyang could push Beijing to see greater value in deeper engagement with Seoul. That is not to say, however, that economic reform in North Korea could not transform the economy into a more enticing investment in the meantime as

[23] See Yin, "The Security Situation on the Korean Peninsula," 109–24.

[24] China has simultaneously attempted to grow its strong economic ties with the ROK while developing economic relations with the North. For instance, in 2012, North Korea's trade with China had hit its highest point at $5.62 billion, surpassing the previous year by 6.3 percent. See "N. Korea's Trade with China Hits Record," *Chosun Ilbo*, 31 December 2012.

[25] For a good recent primer on the China-ROK economic relationship, see Seok Tong-youn, "Deepening Relations between Korea and China," *Korea Herald*, 22 January 2013.

well.[26] While such agrarian rollback measures might look promising, Pyongyang has a history of beginning economic reform only to revert back to a more centralized model.[27] At this point, Beijing's prospects for long-term economic prosperity are greater when it puts its Northeast Asian future in the rising economy of the ROK, rather than in the ever-decaying DPRK.

Troubled PRC/DPRK Relations

Beijing and Pyongyang have always had a troubled relationship. While it is considered brotherly, primarily based on the 1961 Treaty of Friendship, Cooperation, and Mutual Assistance, Beijing treats the North Korean regime with kid gloves.[28] During the Korean War, Beijing's plan for intervention was not simply based on an immediate fear of the flow of refugees (the way it is often currently characterized in the context of the Korean Peninsula) but a longer-term strategic fear of encroachment by U.S. military forces near

The long-term costs of maintaining a relationship of patronage and disproportionate burden sharing with Pyongyang could push Beijing to see greater value in deeper engagement with Seoul.

[26] While the hope for this in recent months has vanished following the Supreme People's Assembly vote against significant reform in its most recent gathering (25 September 2012), few in the Korea watch community believe that the assembly has the power to actually make this decision. Perhaps the variable to watch—along with the dispositions of collective farmworkers—is the introduction of private international business into the North Korean economy. For instance, the Coca-Cola Company has entertained the idea of North Korean investment. See Gady Epstein, "North Korea's Next Purchase: One Investor Hopes Coke Is It," *Forbes*, 28 September 2011.

[27] Such was the case in the 2000s when Kim Chong Il attempted reform in the wake of the famine in the 1990s while also dealing with a currency crisis. The possibility of further collapse and instability has followed in the wake of each crisis, particularly given the threat of desperate measures taken by the Kim regime that poses the chance for greater escalation. While reform is seen as an eventual necessity on the part of the North Korean leadership, too much at one time could create a new and even more devastating crisis than in the 1990s.

[28] See Don Oberdorfer, *The Two Koreas: A Contemporary History* (New York: Basic Books, 2001), 229–31, 260–61.

Chinese territory.[29] Beijing's relationship with the Kim Chong Il regime was strong and based on many years of close engagement but not without frequent disagreement on North Korean actions and policies against the South. At the top of this list of disagreements are the North Korean nuclear and ballistic missile programs and China's fear that Pyongyang's provocations could create greater instability on the peninsula, possibly leading to a war with the South. The fact that this might, in turn, invite additional U.S. forces to the peninsula is ultimately what China points to as destabilizing. In an attempt to put diplomatic pressure on the DPRK to end further development of their nuclear program, China voted to expand sanctions against the DPRK in the UNSC following Pyongyang's stated plan to conduct another nuclear test in 2013.[30]

Often in dealing with the nuclear issue, the United States has assumed that Beijing can and should wield its so-called influence over Pyongyang.[31] However, if Beijing maintains strong relations with Pyongyang, it maintains an equal amount of global influence. Provocations by the North, however, have continued as a means of dealing with the South and the United States, despite China's policy. The fact that Seoul, Tokyo, and Washington rely on Beijing to approach Pyongyang during crises is an effect of China's influence,[32] but the degree of this influence is limited. Diplomatic success during a crisis of unification would be subject to Seoul's assessment of whether Pyongyang could be restrained without the use of force. If China should attempt to play a mitigating role in an attempt at peaceful unification, its influence would likely be tied to the denuclearization of the peninsula. If Pyongyang took active measures, such as declar-

[29] Chen Jian goes into great detail, with evidence from the Soviet and Beijing archives, of many of the Sino-Soviet Alliance factors that Mao and his cabinet considered when planning China's response to the American intervention in Korea in his seminal work on China and the Korean War. See Chen Jian, *China's Road to the Korean War: The Making of the Sino-American Confrontation* (New York: Columbia University Press, 1996), 125–57.

[30] Agence France-Presse (AFP), "US Envoy: 'Very Strong Consensus' With China on N. Korea," 25 January 2013.

[31] "Kyodo: U.S. Prods China To Influence Changes of Course in N. Korea," *Tokyo Kyodo World Service*, in English, 13 August 2012.

[32] Park Min-hee, "Strong Relations with N. Korea Strengthen China's Regional Influence," *Hankyoreh*, in English, 1 September 2010.

ing the 1992 Joint Declaration on Denuclearization of the Korean Peninsula as null and void, this would indicate that the leadership believes less in Beijing's mitigating value than in the value of regime survival, a further sign that China has very little real influence over North Korea.[33]

Beyond 2015

The planned OPCON transfer in 2015 and the U.S.-ROK alliance are consequential for Chinese policy on unification. The status of the U.S. force posture in the South will likely play a central role in the PRC's disposition toward the South, but this will be tempered by what Beijing sees in Pyongyang. If the North Korean leadership's disposition is more conciliatory, the possibility for peaceful unification with the South could return to the narrative. Likewise, if Pyongyang's disposition is more combative and provocative, China will likely seek to maintain a balance of power on the peninsula by sustaining its support of Pyongyang. Since North Korea's policy toward the South is complicated and not simply driven by the presence of U.S. forces on the peninsula, predicting its disposition toward Seoul beyond 2015 is tied, in part, to ROK policy toward the North.[34] Moreover, if the OPCON transfer is not a watershed moment for North-South relations and faith in eventual peaceful unification deteriorates even more, China will apply this to its policy.[35] Since Beijing cannot ignore the regional effects of issues as

[33] Such was the case on 25 January 2013, when North Korea released a statement on this, following the UNSC resolution approving additional sanctions, in which China voted for the first time ever. In part, it stated, "There will be no more discussion on denuclearization between the north and the south in the future. In this connection, we declare complete nullification of the 'Joint Declaration on Denuclearization of the Korean Peninsula' adopted in 1992 and its total invalidity. . . . As long as the South Korean puppet group of traitors persistently pursues a hostile policy toward the DPRK, we will never negotiate with anyone." See "DPRK Committee Decries UNSC Resolution; to Nullify Denuclearization Accord," *KCNA*, 25 January 2013.

[34] North Korea also views U.S. support to the Park Guen-hye administration, and its nonproliferation policy, as a threat to its sovereignty, so these also factor into its calculus.

[35] Periodically, the likelihood of OPCON transfer has been called into question by the ROK government due to continued provocations from the North and the ROK's fear of losing U.S. support. See "S. Korea, U.S. to Discuss OPCON Transition in High-Level Meeting," *Yonhap News Agency*, 29 July 2013.

potentially consequential as the OPCON transfer, it cannot ignore Seoul's unification policy.

Considering Chinese Courses of Action

It is important to consider the hands that China has to play, as well as its intentions, should it decide to intervene.[36] For Beijing, political gain on the Korean Peninsula is illusive. On one hand, the PRC could wrap its Northeast Asian future in a regime whose days always appear to be numbered, or it could attempt to trump U.S. influence in the South by swinging its engagement strategy to favor Seoul. The fact that North Korea has lasted as long as it has perpetuates this predicament. Every year that it barely survives is a reminder that Beijing might have stayed with Pyongyang too long.

Conversely, for the PRC to even subtly abandon North Korea now would present two major strategic challenges. First, the possibility that North Korea could then turn against Beijing—which is understandably unthinkable at this point—could create the instability that China fears so much in its near territorial integrity. Second, the possibility that Beijing's courtship of Seoul would fail might place Beijing in its worst diplomatic position in Northeast Asia in decades. Beijing will have partially severed its relationship with Pyongyang while also failing to win over Seoul, thus losing a tremendous strategic relationship with the United States.

Since Beijing cannot ignore the regional effects of issues as potentially consequential as the OPCON transfer, it cannot ignore Seoul's unification policy.

Though unlikely anytime soon, should North-South relations improve, China could attempt to broker economic reform and cooperation.[37] If Beijing was able to successfully manage trade block negotiations, such as Washington's brokering of the Trans-Pacific

[36] The term "intervene," as used here, is meant to represent any military action that China undergoes beyond its borders during a crisis to affect the outcome of that crisis. This would include any PLA presence on the North Korean side of the Yalu River.

[37] For a good overview of Park Guen-hye's China policy, see Sukjoon Yoon, "A New China Policy for South Korea," *RSIS*, 13 February 2013.

Partnership, the possibility of unification could become a benign eventuality. While economically beneficial in the short term, this could, however, be disadvantageous to both Seoul and Pyongyang in the long term, as it could further solidify China's regional dominance.

If, however, a warming of North-South ties does not occur and North Korean provocations point the peninsula closer to conflict, the circumstances in which the PLA might cross—or affect the environment on the other side of—the Yalu River fall into four categories:

- North Korean instability
- U.S./ROK Alliance invasion of North Korea preceded by Pyongyang as the unambiguous aggressor
- U.S./ROK Alliance invasion of North Korea in which the alliance is perceived as aggressor
- More pronounced North Korean nuclear proliferation (e.g., test of an airborne nuclear device)

These scenarios are consistent with China's primary national interests. Intervention, however, would not necessarily restore the region to an environment favorable to the PRC. China likely understands this but sees intervention as a matter of national survival in the event its borders are penetrated by potentially millions more refugees than Shenyang and Jilin Provinces could absorb. The proximity of U.S. and ROK military forces north of the DMZ would also contribute to Beijing's calculus, if not first and foremost.

Then, what if Beijing decided to intervene? What would the PRC hope to achieve through intervention? It is unlikely that Beijing would seek an open conflict with the United States and the ROK. It is more likely that Chinese leaders would use the opportunity to seek the end of the U.S.-ROK military alliance. If a conflict ended and the status quo was upheld, China would have lost a vital opportunity to change the peninsula in its favor. Thus, one of Beijing's conditions would be the withdrawal of U.S. forces from the Korean Peninsula.

Potential Unification Courses vis-à-vis China

This section will critically evaluate 10 courses of unification and the implications of each circumstance in which they could occur. They are based on the above points and common discussions within the Korean strategic affairs community. Three assumptions are made in this analysis. First, though tactical causes of initiation are not considered here, the possible and/or imminent collapse of the North Korean regime would be a catalyst; thus, Pyongyang would take desperate measures to unify the peninsula through forceful actions. Second, it assumes that the United States will be part of the defense of South Korea. Third, these scenarios assume a time horizon of no more than five to seven years into the future.

Based on the evaluation of Chinese interests and intentions, table 1 lays out a series of scenarios according to outcomes, means, the end state's victor and/or governing body, the nature of Chinese participation, and the estimated likelihood of each.

While peaceful unification (scenarios 1 and 2) would best align with China's interests, there are several reasons why this is an unlikely course. First, Pyongyang's primary objective is regime survival, both the survival of the Korean Workers Party (KPA), as well as the Kim family's survival as North Korea's leadership center. To this end, outside of a commonly recognized cycle of provocation that includes moments of capitulation, no lasting signs show the regime is amenable to a peaceful unification.[38] Second, if unification occurred peacefully, a significant improvement in bilateral relations would need to precede this, likely driven by the end of the North Korean nuclear program. This would also require a willingness on the part of the Kim regime, as well as the KPA, to allow outside control of the North—both remote possibilities, at best—in years to come. Third, the on-again, off-again cycle of nuclear negotiation has served North Korea well, as it continues to survive. The tendency for bilateral relations on the peninsula to fall apart after North Korea has achieved its short-term objectives (e.g., food and fuel aid), or when Pyongyang feels it has ceded too much, endures.

[38] For more on this cycle, see for example Max Fisher, "The Five Stages of North Korean Provocation," *Washington Post*, 24 January 2013.

Table 1. Unification scenarios

Scenario	Outcome	Means	Victor/ governed by	Chinese participation	Likelihood
1	Unification	Peaceful/ diplomacy	Seoul	Diplomacy	Medium
2	Unification	Peaceful/ diplomacy	Pyongyang	Diplomacy	Low
3	Unification	Conflict	Seoul	No intervention; attempted diplomacy	Medium
4	Unification	Conflict	Pyongyang	No intervention; attempted diplomacy	Low
5	Unification	Conflict	Seoul	PLA intervention	High
6	Unification	Conflict	Pyongyang	PLA intervention	Medium
7	Nonunification	Conflict	Status quo	No intervention; attempted diplomacy	Low
8	Nonunification	Conflict	Status quo	PLA intervention	High
9	Nonunification	Peaceful/ diplomacy	Status quo	China makes no attempt to intervene diplomatically	Low
10	Nonunification	Peaceful/ diplomacy	Status quo	Diplomacy	Medium

Based on the current circumstances, if peaceful unification were to occur, it would likely be related to economic desperation in Pyongyang and would be a very partial unification. For instance, it could result in an expanded version of the Kaesong Industrial Zone, in which southerners are allowed to work in the North. Partial economic unification might also allow northerners to work in the South and ROK businesses to develop land in the southern regions of the

North, such as in Hwanghae-bukto or Kangwon-do Provinces.[39] Peaceful unification in any form, however, would not likely favor the regime in Pyongyang in the long term because the South cannot economically absorb the North quickly enough to stave off a humanitarian crisis, such as famine.

During a crisis, noteworthy drivers could push China to intervene (scenarios 5, 6, and 8), but they are subject to scrutiny as long as Chinese policy remains opaque. First, due to the fear of a humanitarian crisis and the rapid migration of millions of North Koreans into China, the PLA would likely seal the border as much as possible with forces from the Shenyang Military Region. The PLA's 16th Group Army has reportedly prepared for this at times in recent years.[40] Second, the relationship between the PLA and the KPA is strong and based on a long history in which the prospect of renewed conflict has likely been discussed between them.[41] Third, given its similar interest regarding the United States and South Korea, the PRC would likely attempt to secure North Korea's nuclear weapons. Given the likelihood that it would not be possible for Seoul, Beijing, and Washington to agree on how this might be done, the chance of confrontation in such a circumstance is very high.

Fourth, the most sensitive factor bearing on whether the PLA crosses the Yalu River and intervenes in a Korean conflict is the

[39] Hwanghae Province is known as the "breadbasket" of North Korea. That is, it is the agricultural food source for much of North Korea. Thus, development of this area would be in the context of securing additional food for the North Korean people. Given a series of droughts and flooding in the last couple of years in which the agricultural infrastructure was decimated in parts of the province, this is not an entirely unlikely scenario.

[40] "PRC 'Greatest Obstacle' to Korea Unification; PLA Border Moves Detailed" ("韓国統一の最も大きな障害物の一つは中国である"), *NK Focus,* in Japanese, 15 February 2008.

[41] Just prior to his death in December 2011, Kim Chong Il received a high-level PLA delegation, to whom he stated the following: "Kim Jong Il also said that the relationship between the North Korean and Chinese armed forces is an important component (重要内容) of the relationship between both countries and that he hopes both sides continue to strengthen exchange and cooperation and make new contributions in order to continue consolidating and developing friendly relations between North Korea and China." See "Chinese PLA General Political Department Director Visits North Korea in Nov 2011," U.S. Army Asian Studies Detachment, 06 April 2012, citing: 李继耐率中国高级军事代表团访问朝鲜 [Li Jinai Leads High-level Chinese Military Delegation on Visit to Korea], 解放军报 [*Liberation Army Daily*], in Chinese, 19 November 2011, 1.

presence, action, and disposition of U.S. forces on and around the peninsula. In the event of a conflict, Beijing maintains that it is unacceptable for U.S. forces to intervene. If the leadership in Beijing felt that its national security interests, including its sovereignty, were threatened, it is likely the PLA would take action. This could occur preemptively by the PLA, outside of the Central Military Commission's decision-making process.

What this would entail would be based on speculation at this point because so little is known of how China plans for such a contingency. One might consider, however, a tiered strategy to how the PRC might approach it. If conflict were to occur, China's reaction would depend on how threatening to the PLC's interests it became. For instance, a partial involvement by the United States—through air and sea-based logistics—would be viewed differently than if the United States played a more primary combat role. The conflict remaining south of Pyongyang would also likely make a difference in the PLA's calculus versus the conflict extending north past Pyongyang and into the northern provinces that border China. Likewise, naval engagements extending north of Nampho (and certainly nearing Dalian, roughly 190 nautical miles from Nampho Harbor) would be significantly less provocative to China than those remaining south of the 38th parallel.

Laying aside the possibility that Pyongyang would emerge victorious, the prospect that the Korean Peninsula would be unified under Seoul's leadership (scenarios 1, 3, and 5) could create an entirely new security dynamic in Northeast Asia, one that China would not find favorable. Although relations are relatively good now between Seoul and Beijing, unification could create one of two problems. First, for the first time in more than 60 years, the buffer between Seoul and China—and therefore between China and U.S. forces—would be eliminated. Second, the presence of U.S. forces would certainly be called into question, leading Seoul to a decision of whether or not the United States should remain on the peninsula. Redeploying U.S. forces from the peninsula could cause a greater shift in the PRC's influence in the region.

Finally, three other important factors must be considered regard-

ing the Chinese calculus to intervene or not. First, the possibility that conflict would not unify the peninsula could bring further instability to China's doorstep (scenarios 7 and 8). Second, seldom discussed is the possibility of Japan's intervention or the likelihood that North Korea would open a second front by attacking the Japanese mainland with a missile strike. This would create additional pressure on Beijing to intervene. Third, if the United States were not to intervene in South Korea's defense, China could still intervene to protect and seal its border with North Korea.

Given the above discussion of circumstances in which unification might be attempted, a few comments on the likelihood and nature of the above scenarios are warranted.[42] First, the scenario in which the peninsula is unified under Pyongyang, and Beijing does not intervene, is probably the least likely to occur (scenario 4). Second, given the cycle of provocation that Pyongyang has adhered to in recent years, the possibility of peaceful unification is hard to imagine in the foreseeable future. Third, based on the circumstances described above, the nature of inter-Korean relations and China's interests on the peninsula (as they are currently), the most likely scenario to occur would be unification through conflict with intervention from China and followed by leadership under a Seoul government (scenario 5). Lastly, due to the fact that the greatest degree of strategic uncertainty would ensue, the most dangerous scenario would be that conflict occurs between the North and South, with Chinese intervention, but without unification being achieved (scenario 8). This scenario would produce a stalemate with a more unstable peninsula than the one following the armistice in 1953.

The implications for U.S. policy makers are complicated, especially given the fact that third-party intervention probably remains a taboo issue at this point with the ROK. First, without a plan for the possibility of Chinese intervention in a conflict on the Korean Peninsula, the decisions of operational forces in a real-world scenario

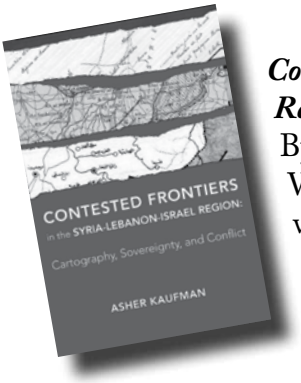
[42] To clarify, by using the term "likelihood," the author refers only to the circumstances under which unification or an attempt at unification would occur. This does not refer to the likelihood of whether an attempt would actually be made, as that is dependent upon several other factors that are beyond the scope of this article.

could become complicated. Second, this could especially affect operations in which U.S. and Korean forces would be in close proximity with PLA forces, increasing the possibility of miscalculation. Third, drawing the United States into a deeper engagement with Chinese forces could lead to a sustained conflict that the United States would not be prepared to terminate.

Conclusion

The prospect of China suddenly shifting its view on unification is minimal. In certain circumstances under which unification might be pursued peacefully, Beijing could show signs of a slow shift in policy to support whichever regime unifies the new Korea. Conversely, if unification occurred through force, China's view would depend upon the degree to which the PLA would be involved in securing Chinese interests south of the Yalu River. If forceful unification occurs in which the U.S. military intervenes and the new Korea is unified under Seoul's leadership, China might be driven away from aligning with the new Korea. A number of the factors that have driven Beijing's policy toward the Korean Peninsula for many years could change rapidly should a crisis escalate. In evaluating such circumstances, one should be mindful of what courses most favor Chinese interests.

Book Reviews



Contested Frontiers in the Syria-Lebanon-Israel Region: Cartography, Sovereignty, and Conflict. By Asher Kaufman. (Washington, DC: Woodrow Wilson Center Press with Johns Hopkins University Press, 2014. Pp. 281. $65.00 cloth.)

Contested Frontiers is an important scholarly work that furthers our understanding of the Middle East. Asher Kaufman, a professor at the Institute for International Peace Studies at the University of Notre Dame, targets a 100-square-kilometer parcel of real estate—a frontier whose coordinates mark the intersection of Syria, Lebanon, and Israel. In 1918, under the reign of the Ottoman Empire, the frontier contained a heterogeneous mix of Alawites, Druze, Greek Orthodox, Greek Catholics, Jews, Maronites, and both Shia and Sunni Muslims. Six years later, they officially became "Lebanese," "Syrian," and "Palestinian," though they lacked any sense of national identity. As we have seen in other parts of the Middle East, the administrative divisions drawn during the colonial mandates left geopolitical shrapnel.

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There are three evenly divided parts to the book, which emphasizes the period 1920 through 2010. First, Kaufman traces the cartographic history of the region from the 1862 Corps Expéditionnaire de Syrie, which France sent to end the Maronite-Druze civil war, through the post–World War I mandates of Palestine, Lebanon, and

Syria. Two themes quickly emerge: first, internationally recognized systems of national sovereignty, rooted in the Westphalian model, recognize states with clearly bounded populations and governing authorities. Second, the Syria-Lebanon-Israel border region did not fit this mold. This, Kaufman tells us, is what he sees as the gap between Western ideals of sovereignty, with geographic conceptions of government and state authority, and the realities of the Middle East, with historic cross-border social migrations and economic trade.

In the second and third parts of the book, the author widens the scope of the study and develops his theme that the region's development "has been shaped by the colonial legacy of the Middle East, the Arab-Israeli conflict, and inter-Arab state dynamics." Cartography and terrain are the connecting files of the book, and the Hermon mountain range, which commands a view of Damascus, looms as the dominating feature of the frontier. Off the southwestern slope sits the Shebaa Farms in Golan Heights. The Hasbani River flows past the Alawi village of Ghajar, whose residents at one time could farm in Lebanon, live in Syria, and bring their product to market in Palestine.

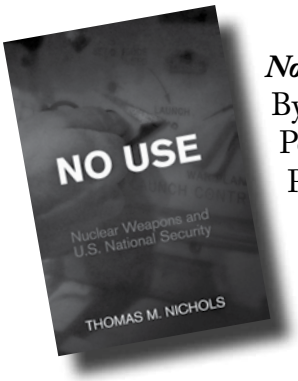
Ghajar is a symbol of the political challenges of the Syria-Israel-Lebanon border frontier. The Alawites, living in a region dominated by Shia and Sunni Muslims and Christians, had identified with Syria before 1967, but occasionally discovered they belonged by sovereignty to Lebanon and had also found, less frequently, that their land was partitioned between the two countries. Israel's annexation of the Golan Heights after the Six-Day War included Shebaa Farms, a disputed area to which Kaufman devotes two chapters, one each from the internal Israeli and Lebanese political perspectives. From 1968 to 1982, Israel's possession of the Golan changed the dynamics of the tri-border region. Kaufman's analysis on these points is thorough and evenhanded.

Kaufman takes on two international conventions regarding borders. One ideal equates clearly defined borders with political institutions, legal processes, the sense of national identity, and general stability. The other belief is that ambiguous, permeable, or nonexistent borders threaten sovereign authority and thus lead to con-

flict. Kaufman asserts that these conventions have driven the United Nations (UN) approach to resolving disputes over the Syria-Israel-Lebanon border frontier. From the outset, there were a number of problems with this approach. First, after achieving independence, Lebanon was not interested in—or capable of—asserting sovereignty along its border with Syria. Second, Damascus has long resisted formal recognition of Lebanese sovereignty and desires a porous border. Third, Israel, in contrast, has viewed the primacy of territorial control and the exercise of military power as vital to its identity and state security. Given these dynamics, Kaufman argues that borderline disputes in the region since 1949 have been an *excuse* rather than a *cause* for states and other actors, including Hezbollah and Palestinian guerillas, to instigate fighting. The international system could view the UN's drawing of the Blue Line of June 2000 as progress; yet, Kaufman writes, "Because Syria and Hezbollah were not interested in a smooth Israeli withdrawal from Lebanon, there was little doubt that the 'armed resistance' would persist."

Kaufman made a breakthrough on the mapping irregularities in the tri-border region at the French diplomatic archives in Nantes. *Contested Frontiers* culminates years of original research and includes previously published journal articles by the author on some of the subject matter. According to his extensive notes and bibliography, Dr. Kaufman has researched the archives in France, Britain, and Israel and visited the UN and the National Archives at College Park, Maryland. The organization, purpose, research design, and hypothesis of *Contested Borders* are easy to discern, and the writing is workmanlike. The title includes 20 maps, all of which are vital to the narrative.

In summary, Kaufman makes a difficult and complex subject accessible while avoiding oversimplification. It is clear to this reviewer that Kaufman nurtured his manuscript through years of rewrites with an eye toward making it the standard text on the subject. In this, he has succeeded.



No Use: Nuclear Weapons and U.S. National Security. By Thomas M. Nichols. (Philadelphia: University of Pennsylvania Press, Haney Foundation Series, 2013. Pp. 216. $39.95 cloth; $39.95 e-book.)

No Use, by U.S. Naval War College professor Thomas Nichols, is a timely, fascinating, and ultimately persuasive book. This past August (2014), as Russian Federation tanks crossed over the border into eastern Ukraine, Russian President Vladimir Putin remarked, "I want to remind you that Russia is one of the most powerful nuclear nations. . . . This is a reality, not just words." Russia, he told radio listeners, is strengthening its offensive nuclear forces to deter any aggression against "New Russia."

It is one thing to talk about withdrawing from the 1987 Intermediate-Range Nuclear Forces Treaty, which Putin has been doing since at least 2007; it is another to raise the specter of offensive nuclear war in a post–Cold War context. And given the apparent apathy with which the American people and armed forces have regarded nuclear strategy in recent years, it is well worth our time to reexamine old arguments to determine whether or not and to what extent they still fit.

In truth, I embarked upon this review intent on not buying this argument based on the book's title alone. And it often seemed that Dr. Nichols, in his attempts to be balanced in his approach, is an astrological Libra who too often disagrees with himself. But as the book unfolded, I became thoroughly captivated by the argument and, like the author, I discovered that many of my beliefs about the utility of nuclear force were based on unexamined premises and poor assumptions based upon my own Cold War experience as a U.S. Air Force officer. Although Nichols gets some things wrong (e.g., that Russia today lacks the "imperial purposes" [p. 8] of the former Soviet Union), in other places he is almost prescient: "Americans must now ask them-

selves if they are really willing to risk a nuclear crisis over, say, a civil war or a border dispute along NATO's eastern edge" (p. 120).

In the introduction and the first chapter, Nichols does a fine job of explaining why nuclear weapons still matter as well as outlining nuclear strategy from 1950 to the end of the Cold War (American; Soviet; and, to a lesser extent, Chinese and those of other nuclear powers). And in the second chapter, he does an equally admirable job of relating how "Cold War-era precepts" continue to "dominate national security policy and nuclear strategies by default" (p. 6). It is this inertia ("it worked during the Cold War, why change anything?")—the very absence of critical thinking about nuclear weapons and strategy—that he finds most troubling.

As he notes in his conclusion, "The people who lived through the Cold War felt they had no choice. . . . Maybe they were right, in their time. Today, we do have a choice" (p. 182). In that regard, he makes some powerful and controversial recommendations to consider for the future of American nuclear weapons policy and strategy, the most salient of which include declaring a doctrine of minimum deterrence, a public commitment to "no first use," and waging a congressionally declared conventional war against any small or "rogue" state that employs a nuclear weapon—with the explicit goal of regime change "and the apprehension or death of the enemy leadership" (p. 158).

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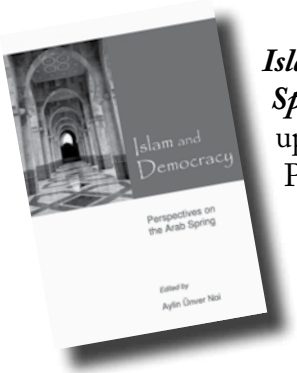
In the end, he concludes that "minimum deterrence is the best option for improving the stability of the U.S. nuclear relationship with Russia and China, but there is little point in trying to tailor a nuclear minimum deterrent to far smaller nations" (p. 157). With respect to smaller nations, "A promise to engage in conventional war . . . reduces the quandary of deterring small states to a simple equation: a nuclear attack on the United States or its allies will produce no other outcome but the end of the enemy regime" (p. 160). Nichols is no shrinking violet. In closing and, as I noted earlier, I was prepared to reject Nichols's

argument, and I suspect many readers of this review will be similarly inclined, which is why anyone concerned about the future of U.S. national security and the role of nuclear weapons should read this very good book.



Islam and Democracy: Perspectives on the Arab Spring. Edited by Aylin Ünver Noi. (Newcastle upon Tyne: Cambridge Scholars Publishing, 2013. Pp. 241; £44.99 cloth.)

The events that shook the foundations of many countries in the Arab world, beginning in Tunisia in December 2010 and continuing in various manifestations today, pose special difficulties for authors and editors who have written or compiled volumes attempting to explain one or more aspects of these events, known by various terms, such as "Arab spring," "Arab uprisings," "Arab revolutions," and the like. The most obvious difficulty is the fast and unpredictable pace of these uprisings. Authors and editors find themselves presenting arguments based on facts and situations that, by the time of the release of their publication, have fundamentally changed. Their arguments, thus, are rendered either invalid, immaterial, or both. The edited volume on *Islam and Democracy: Perspectives on the Arab Spring* is no exception. Were timing its only challenge, this volume would have some merit; however, this volume falls short in its cohesiveness, relevance of chapters, organization, editing, and finally scope and purpose.

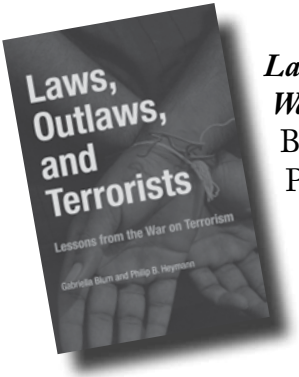
AMIN TARZI currently serves as the director of Middle East Studies at Marine Corps University, Quantico, Virginia. Tarzi earned his PhD and MA degrees from the Department of Middle East Studies at New York University. His latest works include *The Taliban and the Crisis of Afghanistan*, a coedited volume with Professor Robert D. Crews of Stanford University (Harvard University Press, 2008), and *The Iranian Puzzle Piece: Understanding Iran in the Global Context* (Marine Corps University Press, 2009).

The volume is based on papers presented at a 2012 conference in Washington, DC, on nongovernmental agency reports, and previously published articles. The main stated theme of the volume is to examine the "relations between Islam and democracy in the post-Arab Spring era by focusing on the roles of newly established

. . . Islamist governments" (p. 4) and their internal and external policies and actions. Had this been explored in the volume's 10 chapters, it would have been of some value. However, in reality it is a compilation of disassociated, almost randomly inserted chapters. It is important to note that some of the chapters are good stand-alone pieces.

The very curt three-page introduction and additional four pages providing chapter synopses signals to the reader that the volume is not a serious attempt to offer "a more complete overview of the complex and interrelated aspects of the Arab Spring and the roles of Islam and democracy" therein. No attempt was made in the introduction to discuss "democracy," political Islam (Islamism), the possible reasons behind the Arab uprisings, or to weave the chapters together with a cohesive argument. The lack of thesis simply highlights the disorganization throughout the ensuing pages. The very term used to discuss the Arab upheavals is never defined, and throughout such terms as "Arab Spring," "Arab Awakening" (p. 35), "Arab revolutions" (p. 87), and "Arab Uprisings" (p. 181) are used interchangeably, leaving the reader to guess what the editor's intent is in portraying the events under discussion.

After reading pages of contradictory and disconnected information based mostly on newspaper articles, I genuinely could not figure out what Professor Noi was trying to convey. Without dissecting each chapter, I can only conclude that the publisher failed to consider the breadth and depth of the content in an attempt to seem trendy. This volume offers a vivid illustration of why peer-reviewed publications by reputable presses—both academic and commercial—should be a requirement for all scholarly publishing.



Laws, Outlaws, and Terrorists: Lessons from the War on Terrorism. By Gabriella Blum and Philip B. Heymann. (Cambridge, MA: MIT Press, 2013. Pp. 256. $15.95 paper; $11.95 e-book.)

The threat landscape continues to evolve as terrorists consistently hone their methods and enhance their adaptive capabilities. As such, it is vital to continuously assess and adapt strategies to strengthen the nation's security. One of the components essential to improving our security is developing clear parameters from which the United States can approach the war on terror. For example, in an era of global terrorism, it is important to closely examine the complex relationship between law and counterterrorism. This act becomes particularly challenging given the fact that "the war on terrorism is a new kind of war falling outside the parameters of traditional wartime international law or domestic law" (p. xiii). In *Laws, Outlaws, and Terrorists: Lessons from the War on Terrorism*, Gabriella Blum and Philip B. Heymann skillfully discuss the complicated relationship between counterterrorism and legality, rejecting the idea that the American values contained in domestic and international law can be ignored in an effort to keep the United States safe from terrorism.

SATGIN HAMRAH earned a master of public administration from the University of Southern California and a master of arts in international relations from Boston University. She is currently taking short courses at the Naval Postgraduate School and the Department of Homeland Security. Hamrah has conducted extensive research on such topics as critical infrastructure protection, national and international security issues, public-private partnerships, and international relations.

Blum and Heymann, both professors at Harvard Law School, offer a structured and comprehensive analysis of the legal challenges posed by international terrorism for governments of liberal democracies. Due to the nature of transnational terrorism, neither war-

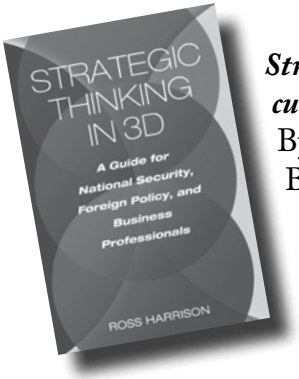
time international laws nor domestic laws are applicable to terrorists or terrorist organizations. Given the legal ambiguity associated with the war on terror, after the attacks of 11 September 2001, "the [George W.] Bush administration determined that law essentially failed to address the new threat" (p. xiii). The authors critique the fact that, after the tragic attacks, the Bush administration intentionally and substantially deviated from the rule of law, essentially operating within a "No-Law Zone." Blum and Heymann further posit that this strategy was ineffective, counterproductive, and harmful to the fight against terrorism.

As the threat landscape continues to evolve, it is indeed obvious that the war on terrorism will continue far into the future. Blum and Heymann maintain a realistic understanding of the challenges associated with this war. While they passionately argue for the preservation of traditional American values, they also seek to enhance the country's security. Given the fluid nature associated with the war on terrorism, the authors recognize that a major terrorist attack can justify changing the balance between law and security for a short period of time, stating that some laws "may be overly restrictive in facing new challenges and emergencies" (p. 45). However, Blum and Heymann persuasively argue that this adjustment should be undertaken via a balanced and well-reasoned approach while simultaneously respecting the underlying principles of the law.

Today's government is confronted by the challenge of implementing a strong counterterrorism strategy that balances the country's need for security and its commitment to liberal democratic traditions. Blum and Heymann bring forth a compelling argument for the development of new laws and strategies to better address the fluid threat landscape. They contend that it is in the country's best interest for new domestic and international laws to be written addressing the challenges associated with the war on terrorism. Such laws would establish a clear paradigm from which to operate and decrease legal ambiguities involved in addressing challenges in the future.

The United States has become increasingly aware that the threat landscape evolves rapidly and that the country is vulnerable to its fluid nature and asymmetric challenges. Professors Blum and Hey-

mann provide invaluable insight into the complex issues of law and counterterrorism policy. While others have previously approached some of the issues discussed, the depth and innovative nature of their analysis and recommendations provide a valuable perspective. Overall, civilian leaders and military planners interested in national security law and policy would benefit by integrating the analysis and recommendations into their security paradigm, potentially resulting in the development of new laws and strategies that further strengthen the nation's approach to the global war on terrorism.



Strategic Thinking in 3D: A Guide for National Security, Foreign Policy, and Business Professionals. By Ross Harrison. (Washington, DC: Potomac Books, 2013. Pp. 197. $23.96 cloth.)

Ross Harrison's *Strategic Thinking in 3D* provides an incredibly practical primer on strategy that is as useful to military professionals as it is to business leaders. In less than 200 pages, Harrison provides a robust review of different approaches to strategy (which will now become my sample for how students should conduct and present a literature review); presents a tridimensional view of strategy, including relevant and timely examples from U.S. foreign policy, national security, and business; and illustrates his argument with an extended case study of al-Qaeda's strategy leading up to and following the 11 September attacks.

Strategic Thinking in 3D offers "a general framework for thinking strategically" (p. xii). Harrison identifies two main shortcomings in existing approaches to strategy: analysts either constrain strategy to sector-specific analysis or they focus on strategy without appropriately accounting for the impact of the strategic actor's interaction with the external environment. For Harrison, strategy transcends sectors and possesses both "inward" and "outward" faces. Inward faces include factors like the actor's resource base, processes that influence decision making, and the potential for path dependency. Outward faces include uncertainty, competition, and the external environment. A key to strategic success is to understand how these faces influence the strategic actor as well as the opponents and potential opponents the strategic actor must encounter in the pursuit of its goals.

Harrison develops this point by analyzing three main dimensions: systems, opponents, and groups. He takes a very basic definition of a system—"a web of relationships where a change in one

part has an effect on the other parts" (p. 54)—and explains different ways the strategist can exploit a given system to gain leverage over an opponent. In terms of opponents, Harrison details how to evaluate opponents' and potential opponents' resources, motivation, and strategy. This analysis yields multiple approaches to influence an opponent's actions by degrading its capability, influencing its decision calculus, and disrupting its strategy. While systems approaches tend to be indirect, opponent-focused approaches tend to be more direct (and therefore higher risk). Finally, Harrison discusses the role of groups in strategy. A group is any collective that can influence the leverage between the strategic actor and its opponent (p. 122). It could be a global nongovernmental organization (NGO) or a developing protest movement. Harrison walks the reader through how to analyze and leverage groups, with the caveats that group-focused approaches take time to work, rarely succeed on their own, and require concrete action behind a strong communication campaign.

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The greatest strength of *Strategic Thinking in 3D* is how much complexity Harrison is able to present clearly. Harrison is an incredibly well organized, logical, and accessible author. Each chapter is a graduate-level seminar on a different aspect of strategy. While the book reads like an introductory text, it is deceptively complex. It only feels straightforward because Harrison has done such a strong job of presenting complex material in an easily understood manner.

Ironically, this is also one of the book's greatest weaknesses. Field grade officers and graduate students in a security studies program would benefit immensely from reading Harrison's book and, while senior officers and foreign policy practitioners would as well, the ideas in the book are presented so clearly that they sometimes seem obvious. This may turn off some readers.

While *Strategic Thinking in 3D* does a great job teasing out facets of strategic analysis, it does not provide a causal model to focus

analysis. To be fair, this is not the book's intent, but this reader was left wondering what to do with the 11 strategic elements of systems, the 9 strategic elements of opponents, and the 2 strategic elements of groups Harrison presents. While understanding these facets of the different dimensions of strategy helps analysts make sense of a case in hindsight, without some understanding of the causal relationships among them, practitioners are left wondering how their interaction will influence strategic effects. Harrison addresses the matter of causality briefly in his introduction with the standard caution that causal predictions are always tenuous (pp. 15–16). This is patently true, but unhelpful. Follow-on empirical research is needed to better understand how different combinations of the facets Harrison describes interact to produce different effects. *Strategic Thinking in 3D* is a great first step to inform strategic planning, but it cannot stand on its own.

All the same, *Strategic Thinking in 3D* is a great one-stop-shop for those new to the field of strategic studies and for those whose study has been constrained to the simplistic Ends + Ways + Means approach. I have already recommended it to my students and lent it to my boss, which may be the ultimate indicators of a book's quality.


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