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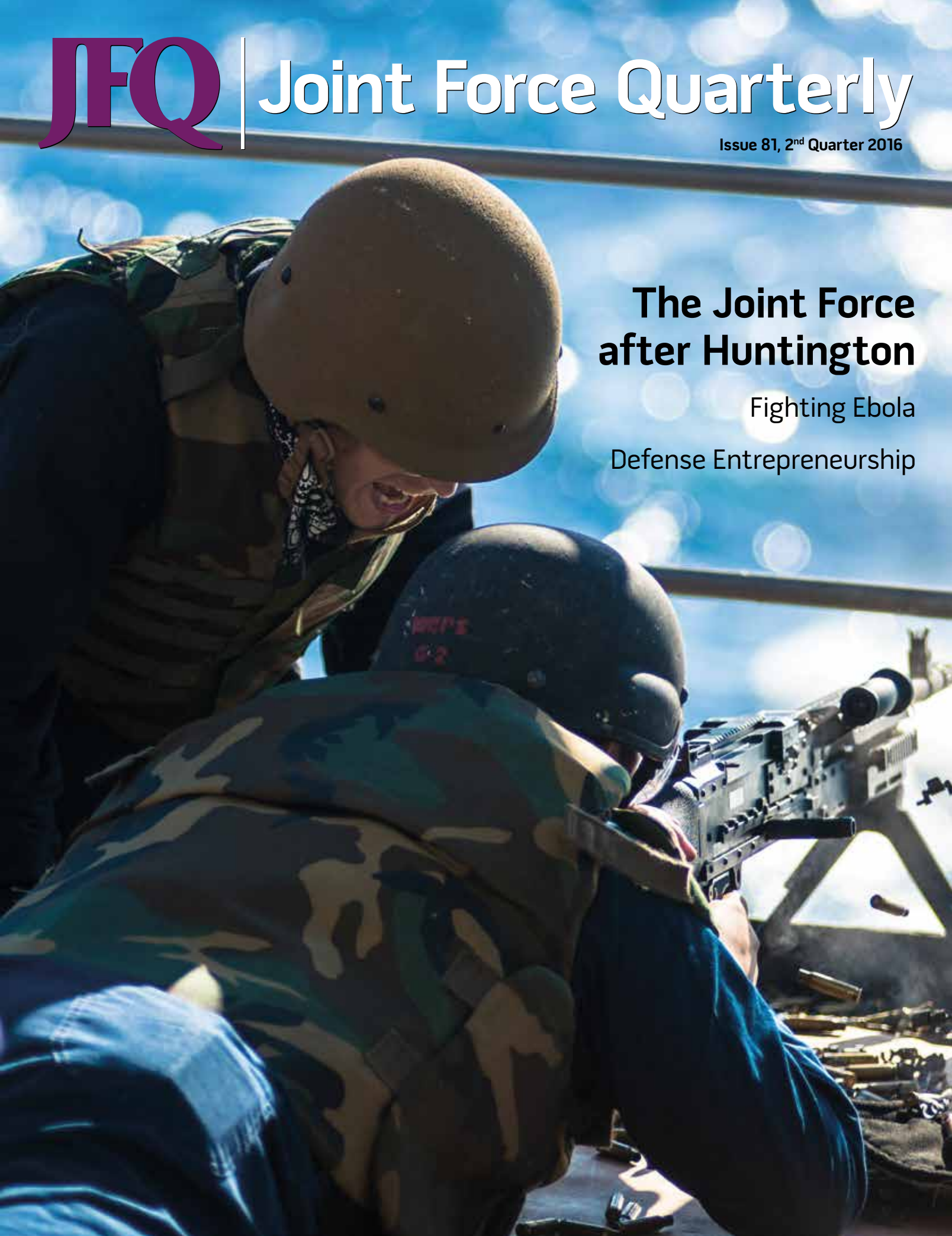

The Joint Force after Huntington

Fighting Ebola

Defense Entrepreneurship

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Cover 2 images (top to bottom): "America's Arctic Warriors" use teamwork to drag ahkio sled loaded with over 300 pounds of gear during annual U.S. Army Alaska Winter Games at Fort Wainwright, January 2016 (U.S. Army/John Pennell); Marine with 15th Marine Expeditionary Unit engages targets during desert survival and tactics course while training with 5th Overseas Combined Arms Regiment in Djibouti (U.S. Marine Corps/Steve H. Lopez); U.S. Air Forces in Europe Band during Fasching parade, February 2015, in Ramstein-Miesenbach, Germany (U.S. Air Force/Timothy Moore)

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Gunner's Mate 2nd Class Arlan Mecham instructs Sailor firing M240 machine gun during live-fire exercise on fantail of USS *John C. Stennis* (CVN 74), Pacific Ocean, August 29, 2015 (U.S. Navy/ Jonathan Jiang)

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President Kennedy, President Eisenhower, and military aides at Camp David, Maryland, April 22, 1961 (Robert L. Knudsen/U.S. National Archives and Records Administration)

Executive Summary

In a previous career, I was a strategic- and operational-level planner. One of the many quotations I learned early on was from one of World War II's great leaders who himself was an effective staff officer, General Dwight D. Eisenhower. Speaking at a gathering of American business leaders well into his second term as President, Ike related a story about a group of officers who were working out how to employ large formations before the Great War broke out. These officers were using maps of the central terrain in Europe, but their superiors at Leavenworth told them to use maps with more familiar U.S. terrain including Gettysburg and other Civil War venues. It seems that planning for the last war is not something new. Unknowingly, the planners' first intuition to use European battlegrounds was correct; a few years later the maps selected were dead center on the battlefields of 1914–1918, but in Ike's view, the skills they developed in the planning effort were more important than the plans they produced. He felt so strongly about the value of the planning process that he told these industrialists, "Plans are worthless, but planning is everything. There is a very great distinction because when you are planning for an emergency you must start with this one thing: the very definition of 'emergency' is that it is unexpected, therefore it is not going to happen the way you are planning" (remarks at the National Defense Executive Reserve Conference, November 14, 1957). Later, as a planner, I told my teammates that planners learn to plan, and then plan to plan again. Nothing was ever fixed because a plan was only a reflection of the information available at the time. The key to success was

how well planners learned from their experiences. This constant renewing is essential for developing the minds of those involved than whether the plan would be useful.

For me, teaching the next generation of leaders in the national security world has served to reinforce Ike's wisdom. Planners plan and then plan again. Then, when a crisis hits, the plan is only as good as the capabilities available and the minds of those charged with figuring out how to adapt. Throwing the plan out and starting over is certainly an option. Sometimes not having a plan yields a better solution. But the more I teach students to think critically—a core capability of any planner or leader in my view—the more I realize the value of any effort is more dependent on how people use their minds than any tactic, technique, or weapon they may call on. After all, smart weapons are only as good as the people who wield them.

From Sun Tzu to John Boyd, from Clausewitz to Ike, all the greats affirmed the value of educated people in dealing with the expected and the unexpected. Feeling underexperienced as a planner or needing some new ideas on how to deal with uncertainty of the future? A good place to help your own personal planning for the future is right here in these pages. We offer you some valuable ingredients for your planning in this and every *Joint Force Quarterly*.

Thinking, planning, and acting at the strategic level are the central themes of any war college curriculum, and this edition's Forum provides a wealth of discussions worthy of consideration for strategists and students of strategy alike. Our first article by James Stavridis, Ervin Rokke, and Terry Pierce investigates the connections between the profession of arms and how military leaders seek to develop and achieve the effects desired in the modern battlespace. Helping us navigate the difficult terrain between our ears, Celestino Perez, Jr., warns us about the biases that strategic thinkers are prone to exhibit and provides a number of useful suggestions on how to combat them. As I emphasized above, the key to the military's ability to develop useful plans are the officers charged with making them. In researching how the military Services develop strategists, M.M. Polski offers a close look at what success the Services have had in this effort. Daniel McCauley next helps us focus on strategic thinking as the key to the development of the next generation of strategic leaders. Virtually every study and article on how to deal with the threats we face today mention the need to be agile, but few have fully connected the dots between theory and practice as Charles Jacoby, Jr., and Ryan Shaw do for us in this issue.

JPME Today continues to attract a wealth of ideas from, for, and about the learners engaged in our schoolhouses, both students and faculty. A team of graduates from the Joint Forces Staff College, Case Cunningham, Patrick Donahoe, Mike Jernigan, and Michael Riggins, gives us a close assessment of today's jointness and how to sustain it (which is very timely given the approach of the 30th anniversary of Goldwater-Nichols). From the U.S. Army War College, Charles Allen and Edward Filiberti offer some thoughts on how our war colleges are evolving. In what is probably one of the most eye-opening articles I have seen in recent years, Matthew Cancian discusses the uncomfortable truth and implications of a steady drop in the quality of our youngest military officers. (Spoiler alert, more education will be required, not less.)

In Commentary, in what is a first for a military journal, Ross Lightsey chronicles the success of the joint task force assigned to help combat the spread of the Ebola virus in 2014–2015. Key to that operation's success was the way the military response helped integrate the many governmental and nongovernmental organizations involved, a model Lightsey finds plausible for future similar operations. As our joint force shrinks, one way that leadership can figure out how to meet mission, Paul Kingsbury believes, is to better use the frontline abilities of senior enlisted leaders who directly influence our troops.

Our Features section offers a range of ideas that both acknowledges where we have been and suggests better ways to get where the joint force needs to go. Always looking into the space between military operations and technological change, T.X. Hammes warns us of the potential for significant threats to our major weapon systems from increasingly easy to obtain technologies. Seeing a requirement for a new organizational structure requirement based on recent partner-nation engagements, Kevin Stringer suggests that the Defense Department field a Joint Military Advisory Command to better deal with this growing area of operations. As Europe's security situation begins to show signs of stress on the NATO Alliance, Christopher Lamb and Susan Stipanovich offer a case study from the Balkans on how to address the growing problem of hybrid warfare. Highlighting another lingering problem from our recent counterinsurgency experiences, Patrick Donley offers his insights on how to build the economic pillar needed to achieve success. As money for defense spending remains tight, James Hasik believes the key to Defense Department entrepreneurship is found in building up the military's internal institutions that promote innovation.

In Recall, David Winkler reflects on jointness as reported in our military histories, which tend to be Service-centric in his view. We also bring you three important book reviews and two interesting articles that accompany the Joint Doctrine Update. First, our friends at the Joint Staff and other agencies complete their three-part series on interorganizational cooperation with a look at the joint force perspective. Next, investigating the doctrine on force protection, Richard Berkebile discusses his views on ways it could be improved.

So if planning is a constant and many of you are involved in figuring out how to deal with the future you face, we hope this edition of *JFQ* provides you with some new inputs to your process. As always, we would like to hear from you as you work through your planning cycle and continue to add to your personal planning "software." Given Ike's trajectory from staff officer to President and all he achieved along the way, it would seem good planning does produce great leaders. **JFQ**

William T. Eliason
Editor in Chief

U.S. Marines practice "combat gliding" during Integrated Training Exercise 2-15 at Camp Wilson on Twentynine Palms, California, January 2015 (U.S. Marine Corps/Kathryn Howard)

Crafting and Managing Effects

The Evolution of the Profession of Arms

By James G. Stavridis, Ervin J. Rokke, and Terry C. Pierce

Recent operations conducted against U.S. businesses and citizens have reemphasized a critical vulnerability in how the U.S. Government thinks about and defends itself against nonkinetic instruments of power. This is particularly true in the manmade domain of cyber. In December 2014, a high-profile breach of Sony Pictures Entertainment was linked to a state-sponsored cyber attack by North Korea. Apparently, North Korea was motivated by opposition to the film *The Interview*, a comedy about the assassination of North Korea's leader Kim Jong-un.[1] The Obama administration responded to Pyongyang's alleged cyber attacks on Sony by imposing sanctions against the country's lucrative arms industry.[2] It is too soon to tell whether this response was appropriate and effective. However, the apparent difficulties we faced in determining how best to respond indicate that the assumptions underlying the definitions and responsibilities of our military profession, most of which emerged following World War II and the beginning of the Cold War, are badly in need of updating to accommodate new forms of warfare.

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The end of World War II and emergence of the Cold War resulted in a surge of brilliant academic scholarship concerning the profession of arms. In 1957, for example, Harvard political science professor Samuel Huntington published his seminal book, *The Soldier and the State*. This was a monumental effort explaining why and how the modern military officer corps represents a profession in the same sense as those of law, clergy, and medicine.[3] Two key themes emerged from Huntington's work. First, the optimal means for civilian control of the military was to professionalize it. Second, Huntington argued that the central skill of military competence, unique to its profession, was best summed up by Harold Lasswell's phrase, "the management of violence."[4] In short, for Huntington as well as other nationally recognized scholars of his time, the unique professional expertise of military officers was focused on the achievement of successful armed combat.[5]

We believe the first part of Huntington's theory still holds. In a democratic society, the military is a profession requiring civilian control. We argue, however, that the Huntington assertion of "management of violence" as the unique expertise of the profession of arms needs to be updated from his 1957 model. We maintain that members of today's profession of arms are "the managers of effects" while the primary responsibility for defining the desired effects, particularly in the strategic arena, lies with civilian leadership at the national level. This assertion builds upon the concept of soft power introduced by Professor Joseph Nye in 1990, which argued that "winning the hearts and minds has always been important, but it is even more so in a global information age."[6] Since 1990, soft power has grown in importance as information-age technologies advance. More importantly, the information revolution is changing the nature of power and increasing its diffusion, both vertically and horizontally, marking the decline of the sovereign state and the rise of a new feudal-type world.[7] Finally, we maintain that these hard and soft effects could be generated not only in the natural domains of land, sea, air, and space, but also in the increasingly significant manmade domain of cyber.

Huntington's World: Civil-Military Relationships

The profession of arms as we know it owes much to Huntington's ground-breaking framework for civil-military relations and national security. *The Soldier and the State* is rooted in a bipolar world where most of the destructive military power was possessed by the United States and Soviet Union. A key tenet of Huntington's work is a complex relationship between civilian and military authorities, with the military subordinated to civilian control. He offers several prescriptions for achieving and maintaining the stability and the utility of this relationship. The output of Huntington's theory includes an intellectual framework for analyzing the extent to which the system of civil-military relations in a society tends to enhance or detract from the military security of that society.[8]

Huntington's focus is on the nation-state with its responsibility to thwart threats arising from other independent states.[9] For him, achieving a stable and productive relationship between civilian and military authorities is essential for maximum security of the state. A key assumption of Huntington's model is that violence almost always originated with a nation-state and was directed toward another nation-state. In this environment, the threat or actual use of force embodied in national armies, navies, and air forces is the best way to keep the peace. Thus, Huntington asserts that the unique expertise of the military profession is to manage violence.

Huntington's model proved useful for half a century, during which security depended largely on national capacities for managing violence in the natural domains of land, sea, air, and space. His model, however, falls short with the emergence of nonkinetic instruments of foreign policy to include those within the cyber domain. Particularly within that domain, nation-states and their militaries are no longer the sole managers for instruments of force. A new assortment of nonkinetic actors using soft power in the cyber as well as the natural domains can achieve hard-power kinetic effects.

Both national and nonstate actors operating in the cyber domain have targeted Iranian oil ministers' computers, foreign financial institutions and energy sectors, and even senior political and military leaders, causing significant damage.[10] In 2011, Chairman of the Joint Chiefs of Staff Admiral Mike Mullen stated that cyber was "the single biggest existential threat that's out there" because "cyber, actually more than theoretically, can attack our infrastructure and our financial systems."[11] Cell phones, for example, are an essential tool for economic prosperity as well as for financing and planning terrorist operations. Significantly, such cell phones costing $400 today match the computing power of the fastest $5 million supercomputer in 1975.[12]

New Answers to Three Questions

Our call to update Huntington's definitions and prescriptions for the profession of arms is driven by the emergence of new answers to three fundamental questions that have been traditionally used to define a global security situation: Who are the major actors? What can they do to one another? What do they wish to do to one another? Scholars of international politics and national security, beginning with Professor Stanley Hoffmann of Harvard University, have taught us that when the answers to these questions change in significant ways, the global security environment is fundamentally altered.[13] Historical examples include the Peace of Westphalia (1648), French Revolution (1789), Congress of Vienna (1815), unification of Germany (1870), and the end of World War II (1945).

Thus, the emergence of new actors (the United States and Soviet Union), capabilities (nuclear weapons), and intentions (propelled by the ideological split between democratic and communist ideologies) formed the intellectual platform and inspiration for "new thinking" about the profession of arms by early

President Obama at Rural Council meeting in Eisenhower Executive Office Building, February 2016 (The White House/Pete Souza)

Cold War scholars. Quite properly, their analyses and policy prescriptions were based on "new realities" of the postwar period and ultimately came to reflect the desired effect of "containment," which was conceived and developed by civilian leadership at the national level.

Realities of the 21st Century

Now we must come to grips with the new realities of the 21st century that emerged with the fall of communism and the Soviet Empire in the 1990s. With such additional dynamics as the incredible advances in technology and communications as well as the end of the Cold War, the global security system clearly has once again faced new answers to Professor Hoffmann's three fundamental questions. As in 1789, 1815, 1870, and 1945, the global world of national security has been turned on its head.

Who Are the New Actors? Some actors on the international scene have disappeared, while others, to include a variety of non–nation state entities, have emerged. Many of the traditional major actors emerged with the Peace of Westphalia in 1648, the treaty ending the Thirty Years' War.[14] This agreement set the stage for the previous warfighting entities such as families, tribes, religions, cities, and even commercial organizations to consolidate and fight under the monopoly of the nation-state militaries.[15] Until recently, such state-versus-state warfare remained the standard model. However, we are now witnessing a partial resurgence of the pre-Westphalia model as nonstate actors such as the Islamic State of Iraq and the Levant, al Qaeda, Hamas, Hizballah, and others—including drug cartels and crime syndicates—have emerged as very real participants in the international security environment.

What Can They Do to Each Other? As demonstrated by the 9/11 attacks, these nonstate actors are capable of global terrorism using various means of attacking nation-states, from suicide operations to decapitation of individual citizens. Ironically, these new actors are in some important ways "returning to the way war worked before the rise of the state."[16] Many of the nonstate actors also are adept at using modern, nonkinetic instruments such as social media and other tools emerging from the cyber domain to achieve their desired effects. By using these cyber tools, they have, in effect, revitalized and bolstered Sun Tzu's notion of "getting into your opponent's head." They have expanded the battlefield beyond the traditional domains of land, sea, air, and space to accommodate more effectively than ever before the battles of wits.

What Do They Wish to Do to Each Other? Nation-state actors still appear focused primarily on traditional goals of maintaining and expanding their power and influence, but they generally

Secretary-General Ban Ki-moon pays respects to victims of terrorist attack in Paris (United Nations/Eskinder Debebe)

follow internationally accepted Geneva Conventions for conducting war. This is not the case, however, with the new nonstate actors, who frequently have eschewed conventions accepted by the more traditional nation-state actors since Westphalia. For them, the battlefield has taken on a wider range of options with less regard for such notions as just war theory. Indeed, recent attacks involving malware tools for hacking into corporate entities such as banks and large merchandise sales entities (Target, The Home Depot, Sony, and others) as well as Internet accounts of private individuals demonstrate a departure from traditional emphases by combatants on enemy military targets.

The Need for a Wider Lens

Cognitive psychologists tell us that when faced with complex problem sets, we are "wired" to simplify our task by using "frameworks, lenses, or concepts" to reduce the problem scope to a more manageable, "bite-size" challenge. Most certainly, this pertains to the analysis of predicaments that nations face on a continuing basis in the arena of national security. Such analysis is at the heart of John Boyd's "orientation phase," the most critical component of his famous "observe, orient, decide, and act" cycle (the OODA loop).[17] It is the stage in the cognitive process at which the participants attempt to define the "reality" of their problem set. Quite understandably, the simplifying lens traditionally used by leaders in the national security arena has focused on the military weapons of the time. Indeed, this tradition has been employed since at least the Chinese Spring and Autumn periods of the 8th through the 4th centuries BCE. Today, it exists in the form of the combined arms warfare (CAW) concept with its focus being ships, planes, tanks, and missiles.

Cognitive psychologists also tell us that such simplifying lenses inevitably turn out to be inadequate for comprehending realities faced in complex problem sets. We have previously argued that the CAW concept encounters this difficulty when used as a lens.[18] In our current security arena, for example, it fails to accommodate the emerging cyber domain as well as nonkinetic instruments of power resident in the traditional land, sea, air, and space domains. Because the CAW concept limits "vision" to the traditional instruments of military force, new forms of power, to include those emerging from the cyber domain, are anomalies and excluded from our concept of reality. Understanding the power of these anomalies requires a new way of thinking and thus a new and wider lens beyond the traditional CAW lens with its focus on the natural domain weapons systems. The new lens we have offered might properly be called combined effects power (CEP).

The CEP construct is a way to maximize and harmonize the effects of kinetic and nonkinetic power. The key issue it tackles is what effects we want to achieve using both hard and soft power.[19]

In a thoughtful piece titled "Winning Battles, Losing Wars," Lieutenant General James Dubik, USA (Ret.), suggests that this dilemma has characterized virtually all post-9/11 wars and attributes it in large part to the "civil-military nexus that underpins how America wages war."[20] We agree with this assertion and believe that the problem emerges with the very first challenge in international conflicts: the selection of proper war aims. Too often, our war aims (desired effects) are neither crisp and coherent nor realistic in terms of their demands on the American people for blood and treasure. One need only review the predicaments we face or have recently faced in Syria, Iraq, Iran, Afghanistan, and North Korea to understand how battles can be won while their wars are lost.

War aims go wrong when they are based on faulty assessments of reality. Assessments of reality are wrong when the concepts or "lenses" we use to help us understand our security predicaments are unable to accommodate complex challenges. In short, we cannot adequately address the complicated, nonlinear aspects of international conflict in today's world if we rely on the linear CAW approaches designed for the simpler hard-power era of the Cold War. Huntington's 1957 framework was brilliant in its hard-power design and has served us well. The time has come, however, to flesh it out with new realities, including soft power, that square more accurately with the 21st century. We must come to grips with the facts that the post–Cold War era has yielded fundamentally new answers to Professor Hoffmann's three questions.

The Need for a New Way of Thinking

We believe that the first step in this process is to change the initial question that is often asked for addressing emerging challenges in the national security arena. In place of the traditional focus on how we might best combine our military instruments to successfully fight wars of destruction, we must first have an answer to a foundational challenge: What is the *effect* that we wish to achieve? In most situations, particularly at the strategic level, this is a question for our senior civilian policymakers. They must be the primary *determiners* of desired effects. Equally important, they must understand that without a coherent definition of *desired effects*, the military and other entities with foreign policy tools are not in a position to craft effective responses beyond the CAW model. This is true regardless of how accurate their assessments of the security challenge might be.

In sum, we believe Huntington's concept of civilian control, with its emphasis on the professional development of our military, remains vital to a democratic society. Also required is a capability and willingness of our national-level civilian leadership to assume a primary role in determining and articulating desired effects. For its part, the military profession must be capable of managing the full spectrum of capabilities within its purview, both kinetic and nonkinetic, to accomplish the desired effects. This may well require some expansion of the traditional professional development process for military personnel. They will need the expertise for an improved capacity to manage a broad spectrum of tools for achieving desired effects as well as the less complex challenge of Huntington's 1957 notions about managing violence.

And so it is that a new first question—"What is the desired effect at the strategic level?"—can open the door to a more holistic assessment of and response to the security predicaments in which we find ourselves. As such, it broadens our perspective to go beyond a traditional focus on military instruments to include a more balanced appreciation for nonkinetic alternatives in the natural domains of land, sea, air, and space and, equally important, the emerging cyber domain. Once our national security leadership has developed desired effects, they become touchstones that can enable military professionals to go about the task of arraying, selecting, and implementing appropriate strategies and instruments of power. Needless to say, desired effects exist at the operational and tactical as well as the strategic level. Civilian leadership is likely to call for greater military involvement in the development of desired effects at these less strategic levels.

The Need to Update Huntington's Framework: The Sony Example

As we wrote this article, our national leadership's response to the challenge of the cyber strike against Sony Corporation could be described as perplexed, if not confused. Whether it was an attack on a vital American interest or, less seriously, an act of vandalism was unclear. The strike was apparently the product of a national decision by North Korea, but the target was a nonstate actor (Sony), and the location of the strike force could well have been a third country. The attack, while not violent in a traditional way, was serious in its costly impact of some $300 million in damages as well as its negative impact on an American First Amendment core value. In short, it represented major new answers to at least two of the fundamental questions asked by Professor Hoffmann: What can the actors do to one another? What do the actors wish to do to one another? From a traditional perspective, North Korea was not a new participant in our nation's historical arena of conflict, but it was clearly acting in a new cyber domain, which made its fundamental character very different from what we faced when it invaded South Korea in 1950. As such, there may or may not have been a new answer to Hoffmann's third question.

Whatever the case, the 1957 vintage Huntington model was proved an inadequate framework for dealing with the North Korean strike against Sony. Indeed, its narrow focus on traditional instruments of force seemed to suggest only two alternatives, both of which were unacceptable. Few, including the President of the United States, were willing to respond with kinetic instruments of power. At the same time, the United States wanted to make clear to North

Korea and the world that the strike against Sony would not go unpunished. Perhaps this notion of punishment was the "desired effect." If so, the instruments of power to create such punishment fell largely outside the traditional tools relevant to Huntington's definition of the "unique military expertise" as the "management of violence."

Conclusion

National security conflicts are increasingly a battle of wits, and we must update the way we use them to match the increasingly complicated world in which we live. The challenge goes well beyond *what* we think; it is also *how* we think about problem sets that rests on new realities and principles that render traditional linear approaches insufficient, if not irrelevant. Against this background, Huntington's classic framework has proved inadequate for accommodating the cognitive and operational pathways required for meeting today's challenges of the orientation and subsequent phases of Boyd's OODA loop. The Sony crisis can, however, provide an important learning experience for dealing with even more serious situations of a similar nature in the future.

General Dubik's assertion that our modern dichotomy of winning battles and losing wars can be attributed at least in part to the "civil-military nexus that underpins how America wages war" has substantial merit. Waging war involves selecting proper war aims; we see this as the crafting of desired effects and consider it to be primarily the responsibility of senior civilian policy leaders as an initial step in their decision matrix. Such desired effects rise above the selection of kinetic and nonkinetic instruments for their achievement. As such, they provide a critical context for the selection of relevant instruments and their operational deployment. This, we believe, is a managerial and leadership responsibility of the military profession.

In summary, we are calling for a new way of thinking on the part of our senior national security leaders, both military and civilian, to accommodate new answers to Professor Hoffmann's three salient questions. This new way of thinking requires us to adapt our simplifying lens to the more complicated world of the 21st century. It also requires us to ask a new question at the outset: What effects do we want to achieve using both hard and soft power? Fortunately, as cognitive psychologists tell us, we are "wired" to do this. **JFQ**

Thousands of people take part in Madrid rally against terror and war, November 2015 (Adolfo Lujan)

Notes

[1] Don Clark and Nathan Olivarez-Giles, "Hackers Hit Sony, Microsoft Videogame Services," *Wall Street Journal*, December 27–28, 2014, B1.

[2] Carol Lee and Jay Solomon, "North Korean Arms Dealers Targeted," *Wall Street Journal*, January 3–4, 2015, A1.

[3] Samuel P. Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge: The Belknap Press, 1957), 7.

[4] Ibid., 11.

[5] Ibid.

[6] Joseph S. Nye, Jr., *Soft Power: The Means to Success in World Politics* (New York: PublicAffairs, 2004), 1.

[7] Joseph S. Nye, Jr., *The Future of Power* (New York: PublicAffairs, 2011), 113–114.

[8] Huntington, viii.

[9] Ibid, 1.

[10] Isaac Porche, Jerry Sollinger, and Shawn McKay, "An Enemy Without Boundaries," United States Naval Institute *Proceedings* 138, no. 10 (October 2012), 35.

[11] Jason Healey, "No, Cyberwarfare Isn't as Dangerous as Nuclear War," *U.S. News and World Report*, March 20, 2013.

[12] James Manyika et al., *Disruptive Technologies: Advances That Will Transform Life, Business, and the Global Economy* (New York: McKinsey Global Institute, May 2013).

[13] Stanley Hoffmann, *The State of War: Essays on the Theory and Practice of International Politics* (New York: Praeger, 1965), 92–93.

[14] William S. Lind, "Understanding Fourth Generation War," *Military Review*, September–October 2004, 12.

[15] Ibid.

[16] Ibid., 12–16.

[17] Robert Coram, *Boyd: The Fighter Pilot Who Changed the Art of War* (Boston: Back Bay Books, 2002), 327–344.

[18] Ervin J. Rokke, Thomas A. Drohan, and Terry C. Pierce, "Combined Effects Power," *Joint Force Quarterly* 73 (2nd Quarter 2014).

[19] Ibid.

[20] James Dubik, "Winning Battles, Losing Wars," *Army Magazine*, December 2014, 16–17.

Marines with 7th Marine Regiment scout for avenues of approach and egress points at al-Asad Air Base, Iraq, October 2015 (U.S. Marine Corps/Akeel Austin)

Errors in Strategic Thinking

Anti-Politics and the Macro Bias

By Celestino Perez, Jr.

Simply the application of force rarely produces and, in fact, maybe never produces the outcome we seek.

—General Martin E. Dempsey
18th Chairman of the Joint Chiefs of Staff
August 14, 2013

How can military professionals improve U.S. strategic performance? If General Martin Dempsey, who served as President Barack Obama's principal military advisor, is correct, American strategic performance too often surprises and disappoints. Strategic discontent, which arises from the failure to conjoin strategic intent and actual outcomes, may well be the default expectation, whereas strategic satisfaction is the rare surprise.

American participation in the 2011 North Atlantic Treaty Organization's (NATO's) intervention in Libya exemplifies the inefficacy that induces strategic discontent. Soon after Operation *Unified Protector*, U.S. policymakers, military leaders, and public intellectuals assessed the toppling of Muammar Qadhafi's regime to be a success. For example, in the

Colonel Celestino Perez, Jr., USA, Ph.D., is the Chief Security Cooperation Planner for U.S. Army North, G5.

spring of 2012, Ivo Daalder and Admiral James Stavridis, USN, published an article in *Foreign Affairs* optimistically titled "NATO's Victory in Libya."[1]

Yet satisfaction with the Libya operation was short lived. Two years after Daalder and Stavridis's glowing report, Daveed Gartenstein-Ross wrote "The Consequences of NATO's Good War in Libya," which included a dismal assessment: "NATO's intervention was thus executed nearly flawlessly, yet appears to be a strategic mistake." To wit, "the intervention in Libya left behind a country beset by instability, and has had a destabilizing effect on Libya's neighbors. Taking these consequences into account, it is not clear that lives were saved on the whole by NATO's intervention."[2] The downstream consequences of Operation *Unified Protector*, including increased regional instability and loss of life, reinforce Dempsey's claim about American strategic inefficacy.

This article, which presumes that military professionals share with policymakers an obligation to improve strategic performance, posits that two intellectual errors contribute to strategic discontent. The first error, anti-politics, indicates the Servicemember's tendency to discount the military importance of ground-level politics. The second error, which aggravates the anti-politics error, is the macro bias in strategic thinking. This bias leads strategists and military professionals to neglect the importance of local knowledge and bottom-up dynamics. This error eclipses crucial strategies to mitigate violence through local solutions.

I argue that there is a strategic imperative for military professionals to study how lethal force and politics are causally interdependent, all the way down to the sandy-boots level. The macro bias in strategy formulation and military planning inhibits a satisfactory understanding of the environment, especially its sociopolitical dynamics; therefore, the integration of cutting-edge political science in military education would mitigate the foregoing errors and thereby improve the prospects for strategic satisfaction.

I first show how several top foreign policy thinkers and practitioners agree that something is amiss in U.S. strategic performance. These thinkers converge regarding a principal source of strategic discontent: the persistent failure to understand the sociopolitical aspects of those places wherein American Servicemembers apply lethal and nonlethal power. More specifically, policymakers and military professionals too often intervene without understanding how military operations affect ground-level politics and, in turn, how ground-level politics affects military and strategic performance.

Note that the term *ground level* as used here is not a synonym for *tactical*. The term describes all interactions that make a physical difference in the world, whether the interaction occurs in the Oval Office (as when the President issues an order) or in Anbar Province (as when indigenous leaders gather for a meeting). Both interactions shape the landscape on which military professionals do their work.

Politics, in this article, encompasses formal and informal governance, economics, civil society, and culture insofar as these systems influence (in Harold Lasswell's well-known formulation) "who gets what, when, how" among persons living in a community.[3] Politics emerges from a constellation of causal elements, including:

- (relatively) nonmanipulable or structural elements (for example, geography, the global economic system, and the distribution of natural resources)
- intentionally manmade or institutional elements (rules, policies, regulations, strategies, and organizations)
- meaning-infused or ideational elements (such as communal norms, values, beliefs, practices, varieties of religiosity and secularity, and narratives)
- hard-wired or psychological elements (cognitive processes, heuristics, and biases).[4]

These four types of elements exert causal force, albeit in different ways, on human behavior. Structural and institutional elements compose a material obstacle course that people must negotiate. Ideational and psychological elements frame how people perceive and interpret the world.[5] The elements also operate simultaneously and vary over time. In the aggregate, they compose—via causal interactions between them—a population's "politics." If military professionals are to serve as politically attuned agents, they should acquire causal literacy in how political outcomes emerge—especially in the wake of violence and conflict.

Military interventions should help attain—at the very least—minimally acceptable political outcomes. Army doctrine mandates that ground forces exist "to create the conditions for favorable conflict resolution."[6] The conditions Servicemembers must create are, as Lieutenant General H.R. McMaster, USA, instructs, fundamentally political. He reminds military professionals that "war is political," a fact he reinforces by quoting the 2014 U.S. Army Operating Concept: "Army forces are prepared to do more than fight and defeat enemies; they must possess the capability to translate military objectives into enduring political outcomes."[7]

If military interventions often fail to achieve satisfactory political outcomes, they do—with much greater reliability—effect a tornadic reordering of those very political elements whose fortunate confluence is necessary for "favorable conflict resolution." It follows that the military professional should study how best to nudge into reality, in cooperation with an international array of military and civilian partners, satisfactory political outcomes.

Macro bias is evident to observant professors and students in mid- and senior-level military education. Teachers often reinforce this bias with the admonition to "avoid getting in the weeds" during planning exercises or seminar discussions about strategy. The macro bias also appears on classroom white boards, which often betray a wave-top approach to understanding a conflict's environment. At times, students (too) neatly arrange the elements composing "the operational environment" in an orderly matrix with columns labeled *political*, *military*, *economics*, *social*, *information*, and *infrastructure*. On other occasions, white boards provide little

Secretary Kerry and Saudi Arabian Foreign Minister Adel al-Jubeir at French Foreign Ministry in Paris before multinational meeting to discuss future of Syria, December 2015 (State Department)

more than a listing of abstract terms, such as *transnational crime organizations*, *drug-trafficking*, *corruption*, and *murder/kidnapping/robbery*. Sometimes only a scatter plot of country names, connected by solid, dashed, or colored lines appears.

The macro bias is most noticeable by what is absent. First, nothing in the classroom suggests that military students are performing scientifically informed causal analysis. Dog-eared articles from, for instance, the *Journal of Conflict Resolution* or *PRISM* do not appear on desks during planning sessions, and white boards do not reflect tightly specified causal arguments about current and future conditions. Second, students in military classrooms do not engage in sustained study of real-world contemporary crises—comprising actual populations, political dynamics, and armed actors—with the detail and skill necessary for adequate intelligence analysis, military planning, or strategy formulation.

Reforming military education would be a way to account for ground-level politics and mitigate the macro bias. The integration of the social sciences (especially political science) in the military classroom could instill the very modes of critical analysis and creativity senior leaders desire. This reformation is feasible, especially for a subset of the student populations in mid- and senior-level education.[8]

The proposal to integrate social and political science in military education is consistent with the aims of the Department of Defense (DOD) and joint community. The Minerva Initiative is a "university-based social science research initiative," whose principal goal is "to improve DOD's basic understanding of the social, cultural, behavioral, and political forces that shape regions of the world of strategic importance to the [United States]."[9] Similarly, in 2013, General Raymond Odierno, USA, General James Amos, USMC, and Admiral William McRaven, USN, of U.S. Special Operations Command called upon the American profession of arms to "expand the dialogue around the 'social sciences' of warfare" as a way to reverse poor strategic performance.[10] Finally, in January 2015, the U.S. Army War College convened an assembly of social scientists to produce a framework for understanding the "human elements" in the operational environment. The workshop's sponsors included U.S. Army Training and Doctrine Command, U.S. Special Operations Command, and U.S. Marine Corps.

Efforts to mitigate anti-politics and the macro bias via educational reform will be difficult. One challenge is the potential for senior leaders to limit their efforts at

strategic reform to rhetoric and exhortation as opposed to closely monitored educational reform and talent management. A second challenge is a "bailiwick approach" among educators regarding what military expertise and advice entail; that is, the flawed idea that the military's expertise, or bailiwick, concerns solely the unidirectional delivery of ordnance, whereas the reciprocal causal connections between war's destructive and constructive elements are someone else's (perhaps a diplomat's) bailiwick.

Politics, Anti-Politics, and the Military Professional

Prominent thinkers and practitioners observe that the American polity suffers from recurrent bouts of strategic discontent. Henry Kissinger, in the *Washington Post* in March 2014, remarked, "In my life, I have seen four wars begun with great enthusiasm and public support, all of which we did not know how to end and from three of which we withdrew unilaterally."[11] In his book *How Wars End*, Gideon Rose attributes the country's war termination troubles to strategic leaders—both civilian and military—who fixate on war's destructive dimension while failing to apply "due diligence" to its constructive, political dimension.[12] Similarly, Odierno, Amos, and McRaven attribute a strategic-level "repetitive shortfall" to the military's neglect of sociopolitical dynamics: "Time and again, the U.S. has undertaken to engage in conflict without fully considering the physical, cultural, and social environments. . . . One has only to examine our military interventions over the last 50 years in Vietnam, Bosnia and Kosovo, Somalia, Iraq, and Afghanistan to see the evidence and costs of this oversight."[13] Strategic discontent, if the foregoing thinkers are right, has its roots in the neglect of "the political," and especially the two-way causal connections between military interventions and politics.

Efforts to link strategic discontent to the neglect of sociopolitical dynamics are a recurrent theme among critics. This neglect is not solely the policymaker's error. Military professionals also play a role. The military officer should become an "expert in violence" by studying how violence—regardless of source—affects politics and vice versa. It is not sufficient to be a mere "manager of violence" who knows only how to deliver ordnance.[14]

Odierno's own instruction regarding the military's neglect of politics is emphatic and self-critical:

The thing I learned most—and I always use Iraq as an example. When we went into Iraq in 2003, we did everything we wanted to do. We very quickly removed the regime. We gained control of the population. We had no idea or clue of the societal devastation that had gone on inside of Iraq and what would push back on us. We didn't even think about it until we got in there. So we can't allow that to happen again.[15]

The application of lethal military power certainly affects rifle-bearing adversaries. But lethal power also disturbs politics, and this political disturbance in turn engenders boomerang effects on military and strategic performance. Odierno's reflection shows how the causal relationships between military force and politics are reciprocal and hidden. His memory also betrays the existence of anti-politics, which indicates the Servicemember's tendency to neglect the military relevance of sociopolitical factors.

Rose and Odierno are not alone in highlighting the influence of anti-politics. A 2012 study by the Joint Staff finds that the U.S. military's number one shortcoming during this century's first decade of war was a "failure to recognize, acknowledge, and accurately define the operational environment," to include "information about ethnic and tribal identities, religion, culture, politics, and economics."[16] A 2014 RAND report echoes the Joint Staff's findings by attributing mediocre strategic performance to the military professional's failure to give due weight to "the sociocultural and historical knowledge needed to inform understanding of the conflict, formulation of strategy, and timely assessment."[17]

The need to overcome anti-politics is not only a counterinsurgency imperative. It is crucial to all military operations. Operation *Iraqi Freedom* began in 2003 as a conventional interstate war; however, it morphed into something else partly because of (if Odierno is correct) the U.S. military's failure to appreciate political elements. Politics was similarly important to Dwight Eisenhower, who in 1942 lamented, "The sooner I can get rid of these questions that are outside the military in scope, the happier I will be! Sometimes I think I live ten years each week, of which at least nine are absorbed in political and economic matters."[18]

If Odierno's and Eisenhower's experiences illustrate the centrality of politics to interstate wars, Major General Michael Nagata, USA, asks similar sociopolitical questions about the Islamic State of Iraq and the Levant (ISIL). Nagata, the commander of U.S. Central Command's special operations effort in the Middle East, declares, "We do not understand the movement, and until we do, we are not going to defeat it." Moreover, "We have not defeated the idea. We do not even understand the idea."[19]

Military professionals hoping to understand ISIL should consult the relevant scholarship. Over the past 15 years, a community of political scientists has become especially attuned to how civil wars comprise entangled lethal and political elements at the ground level. Stathis Kalyvas, an authority on civil wars, observes that "analysis of the dynamics of civil war (how and why people join or defect, how violence takes place, et cetera) is impossible in the absence of close attention to local dynamics."[20]

Kalyvas's research program, which explores ground-level lethal and political dynamics, could help military professionals improve the efficacy of humanitarian interventions, transitions to civilian authority in the wake of conventional wars, and the prosecution of irregular wars. Yet it is precisely the intertwined lethal and political dynamics that military professionals neglect.

Senior military leaders, seeking to align the American profession of arms with the imperatives of the security environment, grasp the importance of overcoming anti-politics. They desire officers to expand their intellectual diet to

encompass the study of politics, including governance, economics, culture, ethics, and lethal power. For example, Dempsey articulates the need to study rising powers, nonstate actors, criminal organizations, religious groups, and ideological agitators.[21] Odierno calls for the study of cultures as well as socioeconomic and political underpinnings.[22]

The testimony of General Lloyd Austin, USA, before Congress illustrated how political elements are a top military concern. His 2014 and 2015 posture statements describe the importance of appreciating "the political, economic, and socio-cultural currents" that drive attitudes and behaviors in U.S. Central Command's area of responsibility.[23] In March 2015, Austin more specifically described the "underlying currents" he must consider, including fracturing institutions, a growing ethno-sectarian divide, a struggle between moderates and extremists, rejection of corruption and oppressive governments, and a youth bulge. Most importantly, Austin insisted, "To be effective, our approach in dealing with the challenges that exist in the region must address these complex root causes."[24]

Any examination of "complex root causes" requires analytic attention, as Austin instructs, to ground-level politics. In fact, the 2014 Army Operating Concept states, "Army commanders [must] understand cognitive, informational, social, cultural, political, and physical influences affecting human behavior and the mission."[25] A careful reading of this passage reveals two imperatives. First, military students must learn to proffer and assess causal claims. Strategies, campaign plans, operations orders, and mission statements are ultimately causal claims about the good things one hopes will arise if a commander employs his or her troops, resources, speech, and relationships in a particular way.[26]

Second, the military professional's understanding of causality must be politically attuned. In McMaster's words, "We need to educate our soldiers about the nature of the microconflicts they are a part of and ensure they understand the social, cultural, and political dynamics at work within the populations where these wars are fought."[27] This imperative requires mid- and senior-level military students to *study* those political elements whose fortunate confluence constitutes "favorable conflict resolution" and "enduring political outcomes." Put otherwise, this imperative requires that military teachers and students study the new science of politics and war.

The Macro Bias in American Strategic Thinking

Overcoming anti-politics requires attentiveness to ground-level politics. Political scientist Séverine Autesserre's research program posits that the neglect of ground-level politics extends beyond the profession of arms to the international peacebuilding community. She argues that "peacebuilders" (including diplomats, representatives of nongovernmental organizations, and military officials) tend to restrict their analysis of a conflict's causes to regional- or country-level actors and above. This macro bias causes peacebuilders working in the Democratic Republic of the Congo, for example, to neglect local drivers of violence and, thereby, local solutions.[28] Autesserre's findings suggest that military practitioners and policymakers can, with fastidious attention to bottom-up causes of violence, improve strategic outcomes.[29]

The macro bias, when applied to the American military context, comprises three subordinate biases regarding levels, anti-intellectualism, and compartmentalization. I briefly apply this argument as a plausibility probe to two excellent strategic education texts: Terry Deibel's *Foreign Affairs Strategy* and Colin Gray's *Fighting Talk*.[30] My aim is to indicate how these biases inhere in the texts. To the degree the works are representative of American strategic pedagogy and practice, the biases likely inhere in American strategic thinking more broadly.

The Macro Bias. Autesserre contrasts macro or "top-down" accounts of conflict in the Democratic Republic of the Congo with micro or "bottom-up" accounts of conflict. The former focus on regional- and country-level actors and dynamics, whereas the latter feature local tensions concerning political power, land rights, and ethnicity. Autesserre finds that the macro bias "precluded action on local violence, ultimately dooming intentional efforts" to bring peace to the Congo.[31]

Deibel's approach seemingly postures his readers to cultivate a macro bias. He insists that strategy is, first and foremost, "comprehensive." Strategists are "to look at the whole picture" and make "a conscious effort to consider the whole range of issues in the nation's external relations, those relating to functional concerns (like population, the environment, proliferation, or trade) as well as those relating to all regions and countries of the world."[32] Deibel warns against the "natural temptation of policymakers, confronted with crisis after crisis . . . to jump into the problem of the day and try to solve it."[33]

But the question arises: If the strategist is to cleave to the macro or comprehensive level (that is, "external relations," "functional concerns," and "regions and countries"), when are meso- and local-level dynamics to receive due analytic attention? A good strategy is tactically feasible; for example, it is feasible at the physical locus of intervention. But how are strategists to assess local feasibility and identify windows of opportunity without a granular analysis of local dynamics?[34]

Colin Gray asserts that strategists should bridge policy and tactics, particularly with regard to feasibility.[35] Do strategists who strive to be "comprehensive" cultivate the skills necessary to analyze a variety of local dynamics and, thereby, assess feasibility? Deibel fails to address this requirement. It is notable that Deibel's own proposal for a foreign affairs strategy specifies just two actors in his layout of the international strategic environment.[36] These actors, "countries" and "cultures," are macro-level elements whose consideration does not penetrate to the local level. Yet such analytic penetration—as Autesserre finds—is a prerequisite for good strategy.

The Levels Bias. A derivative bias relates to the centrality that levels play in thinking about strategy. Gray speaks of

Secretary Carter attends North Atlantic Council meeting at NATO headquarters in Brussels, February 2016 (DOD/Adrian Cadiz)

"three levels of behavior," each captured in his maxim, "Strategy is more difficult than policy or tactics."[37] He adds, "Policymaking and tactics are not easy, but they are activities for the performance of which there are skilled professionals, steeped in relative experience."[38] Gray suggests that those operating at the point of physical intervention confront more or less familiar problems. But this assumption is misleading, especially if the world's complexity is scale-free.

Every potential or actual interaction that concerns policymakers and strategists relates to the ground level and entails physical effects. For instance, Gray speaks of seven "contexts of war," including the political, sociocultural, economic, technological, military-strategic, geopolitical and geostrategic, and historical.[39] These contexts of war cease to be abstractions when they converge in complex ways at the ground, local level.

All interactions and proposed interventions are local; for example, a head of state instructs a general to launch an attack; a local leader calls for his followers to commit genocide; a terrorist decapitates a journalist. Strategists and military professionals must not merely pay attention to "the local"; they must rigorously analyze it. For instance, proposals to intervene in a civil war (such as Syria's and Iraq's) must account for Kalyvas's scholarship on the relationship between a civil war's "master cleavage" (the country-level conflict) and the war's many "local cleavages" animated by private conflicts and agendas.[40]

The strategist should dampen thinking in terms of levels. The alternative, following the sociologist Bruno Latour, is to "flatten" and "localize" one's worldview and focus more on concrete sites of interaction between lethal, sociopolitical, cultural, and technological systems.[41] Moreover, and following the political theorist William Connolly, the strategist should adopt a capacious definition of "system" and "agency" such that persons, terrain, natural resources, organizations, rule sets, norms, neural networks, viruses, and ideas are understood to be dynamic systems with agency insofar as they interact and, at times, create altered or completely new systems.[42]

Examples of these system interactions include Max Weber's Protestant ethic thesis, whereby an economic system and a cluster of interpreted religious symbols interact in concrete associations among persons to engender modern capitalism;[43] or a Syrian rebel uses an iPad's accelerometer and global positioning system to adjust mortar fire;[44] or a volcanic eruption in Iceland engenders the firing of General Stanley McChrystal, USA, and the revamping of U.S. strategy in Afghanistan.[45]

Strategic thinking, rightly understood, should not be confined to a rarefied "strategic level"; rather, strategists must now attend carefully to how their decisions, in the wake of an interaction *here*, might affect dynamics at

Soldier assigned to Delta Company, 1st Squadron, 8th Cavalry Regiment, 2nd Brigade Combat Team, 1st Cavalry Division, conducts presence patrol around U.S. Consulate in Herat, Afghanistan, January 2014 (U.S. Army/Alex Flynn)

the proposed locus of intervention *there*. Attending to "the local" is not optional, but a critical part of the strategist's and military professional's task.

Anti-Intellectual Bias. The implications of the foregoing argument are severe. If the strategist is to craft comprehensive foreign policies and strategies regarding Ukraine-Russia, Syria-Iraq, China, cyber, and so forth, decisions about prioritization and interventions must account for local knowledge. Since this intellectual burden is immense, strategists must integrate expert perspectives in their analyses, including scholarly, practitioner, and stakeholder perspectives.

The expert perspectives relevant to any single case will include a multiplicity of complementary and competing accounts. The strategist must develop the skill of examining and assessing these divergent expert perspectives and their attendant causal stories about current conditions and proposed interventions. This enquiry, called abductive reasoning, exists as a scientific practice;[46] however, it is underdeveloped as a habit of mind appropriate for practitioners, especially military professionals and strategists.[47]

The practice of abductive reasoning requires the integration of leading-edge expert perspectives; however, there exists an anti-intellectual strain that encourages strategists and military professionals to limit their reading to a certain canon. For instance, Gray writes, "If Thucydides, Sun-Tzu, and Clausewitz did not say it, it probably is not worth saying."[48] Gray's caveat takes on a disciplinary parochialism as well: "By way of sharp contrast to the contributions from arts disciplines, science and social science do not offer methodologies useful for the derivation of helpful understanding of the strategic future." He goes on to assert that social science's methods are "thoroughly disabled, not merely disadvantaged, by their nature."[49]

Gray's instruction on this matter is unfortunate, particularly given his influence among strategic and military educators. The 2014 Quadrennial Defense Review describes several potential threats, including North Korea, China, violent extremism, sectarian conflict, proxy groups, resource competition, fragile states, spillover effects, criminal organizations, militias, corrupt officials, and transnational crime.[50] Social and political scientists are producing valuable work on these topics. Clausewitz should be a staple in military classrooms, but so too should the science that bears directly on contemporary and future military work.

Deibel recognizes the value of social science, but he fails to unpack how this value translates into the exercise of strategic judgment. For instance, he spends nine pages reviewing older literature from scholarly and policy journals on the efficacy of sanctions as an instrument of national power.[51] This exercise is fruitful. Yet Deibel should include one additional instruction: For any given problem, the strategist should consult the relevant science. This exercise would bring to the fore complementary and competing causal stories whose mapping would fruitfully complicate the strategist's and military professional's thinking. This exercise is the fundamental requirement of abductive reasoning as appropriate to the practitioner.

The neglect of abductive reasoning entails a two-fold danger. First, the military classroom will continue to rely on fictional scenarios and accompanying scenario reference books as opposed to real-world crises. Fictional scenarios discourage original research and thereby short-circuit the very skills military professionals and learning organizations require. Second, students will, in the absence of theory, rely too heavily on intuition. This reliance is counterproductive, particularly when much of politics, of which war is a subset, is hidden and counterintuitive.

For instance, anyone evaluating options to counter ISIL should consult the vast literature on civil wars.[52]Also useful is Marc Lynch's Project on Middle East Political Science, which renders much of literature easily digestible for, among others, troopers and strategists.[53] Officers who understand ground-level politics

and violence in civil wars improve their preparation for all missions, from security cooperation to conventional wars.

Compartmentalization Bias. Finally, strategic thinking suffers from a compartmentalization bias (which equates to the bailiwick approach plaguing educators described previously) whereby military professionals believe their role is merely to fight wars while civilian partners think about political outcomes. This bias led General Walter Boomer, USMC, to wonder why State Department representatives were not parachuting out of planes to handle the conflict termination phase following Operation *Desert Storm*.[54] The same bias led General Tommy Franks, USA, to tell his interagency partners, "You pay attention to the day after and I'll pay attention to the day of."[55]

Compartmentalization is dangerous given that no expertise exists (or can exist) for achieving war's constructive aims. No guidebook exists (or can exist) for attaining adequate stability in the wake of war's destruction.[56] Since the thread of continuity between war's lethal and constructive aspects is violence (whether potential or actual), the officer should cultivate the sensibility and skill necessary to proffer advice about not only ordnance delivery options, but also how to "win the peace." Hence, military professionals—with the advantage of a comprehensive educational system—must read the social and political science Gray rejects.

Neither elected officials nor the military's interagency partners have the requisite expertise about how to dampen ambient violence and stabilize environments. Military professionals must take up the strategic slack, since violence—including its dormancy, onset, maintenance, and dissipation—is military business.

Conclusion

If the thinkers cited throughout this article are correct, something is amiss in U.S. strategic performance. Two habits of mind—anti-politics and the macro bias—are contributing factors. Senior leaders, including Odierno and McMaster, sense that anti-politics is a problem, which is why they implore military professionals to study the complex interactions among the exercise of lethal power, the sources of ambient violence, and politics. Similarly, Autesserre's research program reveals that peacebuilders (including military professionals) too often neglect bottom-up sociopolitical sources of violence and war. The need to attend to these political elements is arguably the principal lesson from the century's first decade of war. Yet despite top leaders' exhortations and a new, politically attuned Army Operating Concept, it is not clear that military professionals and their educators are postured for change.

Military expertise must entail more than the self-directed synchronization of command and control, intelligence, movement and maneuver, fires, sustainment, and protection. When a policymaker or superior commander asks for military advice, the military leader cannot simply proffer options for the delivery of ordnance. Military leaders must cultivate an expertise in violence per se. Put otherwise, military professionals ought not to be mere "managers of violence." They must become "experts in violence."

Experts in violence are able to proffer advice (whether to a President or battalion commander) armed with expertise about how the application of lethal power and ambient violence affect sociopolitical dynamics and how sociopolitical dynamics might dampen or amplify ambient violence and the ability to apply military power. Put simply, the new military professional should become an expert in violence as both an independent and a dependent variable. Strategists and military professionals must become experts in both ordnance delivery and sociopolitical drivers of conflict.

Fortunately, talented political scientists are doing groundbreaking work on the relationship between violence and politics while simultaneously satisfying the scholar's ethical obligation. In Marc Lynch's words, "Our primary ethical commitment as political scientists . . . must be to get the theory and the empirical evidence right, and to clearly communicate those findings to relevant audiences—however unpalatable or inconclusive they might be."[57] If the scientist has an ethical obligation to get the causal story right, the practitioner, especially the military professional, has an ethical obligation to consult the causal story. The place to begin is in the classroom. **JFQ**

Notes

[1] Ivo H. Daalder and James G. Stavridis, "NATO's Victory in Libya: The Right Way to Run an Intervention," *Foreign Affairs* 91, no. 2 (March–April 2012), available at <www.foreignaffairs.com/articles/137073/ivo-h-daalder-and-james-g-stavridis/natos-victory-in-libya>.

[2] Daveed Gartenstein-Ross, "The Consequences of NATO's Good War in Libya," *War on the Rocks*, May 8, 2014, available at <http://warontherocks.com/2014/05/the-consequences-of-natos-good-war-in-libya/>. See also Alan J. Kuperman, "A Model Humanitarian Intervention? Reassessing NATO's Libya Campaign," *International Security* 38, no. 1 (Summer 2013), 105–136.

[3] Harold D. Lasswell, *Politics: Who Gets What, When, How* (New York: Whittlesey House, 1936).

[4] Craig Parsons, *How to Map Arguments in Political Science* (Oxford: Oxford University Press, 2007), 11–20.

[5] Ibid.

[6] Raymond Odierno, "Foreword," in Army Doctrinal Pamphlet 3-0, *Unified Land Operations* (Washington, DC: Headquarters Department of the Army, October 10, 2011).

[7] H.R. McMaster, "Continuity and Change: The Army Operating Concept and Clear Thinking about Future War," *Military Review* 95, no. 2 (March–April 2015).

[8] From 2012 to 2014, I led a scholars' seminar at the U.S. Army Command and General Staff College titled the "Local Dynamics of War." The aim of the seminar was to weave cutting-edge social and political science into existing modes of strategy formulation and military decisionmaking.

[9] The Minerva Initiative, available at <http://minerva.dtic.mil/overview.html>.

[10] Raymond T. Odierno, James F. Amos, and William H. McRaven, *Strategic Landpower: Winning the Clash of Wills* (Fort Eutis, VA: Army Capabilities and Integration Center, May 6, 2013), available at <www.tradoc.army.mil/FrontPageContent/Docs/Strategic%20Landpower%20White%20Paper.pdf>.

[11] Henry Kissinger, "To Settle the Ukraine Crisis, Start at the End," *Washington Post*, March 5, 2014.

[12] Gideon Rose, *How Wars End* (New York: Simon & Schuster, 2010), 3.

[13] Odierno, Amos, and McRaven.

[14] Samuel Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge, MA: Belknap Press, 1957).

[15] Raymond T. Odierno, "Amid Tighter Budgets, U.S. Army Rebalancing and Refocusing: A Conversation with Raymond T. Odierno," interview by James Sciutto, Council on Foreign Relations, February 11, 2014, available at <www.cfr.org/united-states/amid-tighter-budgets-us-army-rebalancing-refocusing/p32373>.

[16] *Decade of War, Volume 1: Enduring Lessons from the Past Decade of Operations* (Washington, DC: Joint and Coalition Operational Analysis, June 15, 2012), 3–4.

[17] Linda Robinson et al., *Improving Strategic Competence: Lessons from Thirteen Years of War* (Santa Monica, CA: RAND, 2014), vi–vii.

[18] Harry L. Coles and Albert K. Weinberg, *Civil Affairs: Soldiers Become Governors* (Washington, DC: U.S. Army Center of Military History, 1964), 3.

[19] Michael K. Nagata quoted in Eric Schmitt, "In Battle to Defeat ISIS, U.S. Targets Its Psychology," *New York Times*, December 28, 2014, available at <www.nytimes.com/2014/12/29/us/politics/in-battle-to-defang-isis-us-targets-its-psychology-.html?_r=0>.

[20] Stathis Kalyvas, "The Ontology of Political Violence," *Perspectives on Politics* 1, no. 3 (September 2003), 481.

[21] "General Dempsey's Remarks at National Defense University," January 14, 2014, available at <www.jcs.mil/Media/Speeches/tabid/3890/Article/571921/gen-dempseys-remarks-at-the-national-defense-university.aspx>.

[22] Odierno, "Amid Tighter Budgets."

[23] General Lloyd J. Austin III, statement on the posture of U.S. Central Command to the Senate Armed Services Committee, 113th Cong., 2nd sess., March 6, 2014, 4.

[24] General Lloyd J. Austin III, statement on the posture of U.S. Central Command to the House Armed Services Committee, 114th Cong., 2nd sess., March 3, 2015, 5–6.

[25] Pamphlet 525-3-1, *The U.S. Army Operating Concept: Win in a Complex World* (Fort Eustis, VA: U.S. Army Training and Doctrine Command, 2014), 19.

[26] See also Odierno, "Amid Tighter Budgets": "As we train our leaders, it's about training them to figure out, why is this happening? Then, what's the right tool to fix it? And we have to understand it much earlier in our careers now."

[27] "How Militaries Learn and Adapt: An Interview with Major General H.R. McMaster," interview by Andrew Erdmann, McKinsey and Co., April 2013, available at <www.mckinsey.com/insights/public_sector/how_militaries_learn_and_adapt>.

[28] Séverine Autesserre, *The Trouble with the Congo: Local Violence and the Failure of International Peacebuilding* (Cambridge: Cambridge University Press, 2010).

[29] Séverine Autesserre, *Peaceland: Conflict Resolution and the Everyday Politics of International Intervention* (Cambridge: Cambridge University Press, 2014).

[30] The merit of the plausibility probe is to explore whether a given argument has sufficient warrant for further study. The probe does not produce a knock-down, unassailable argument; however, it can illumine a serious possibility worth considering.

[31] Autesserre, *The Trouble with the Congo*, 10–11.

[32] Terry Deibel, *Foreign Affairs Strategy: Logic for American Statecraft* (Cambridge: Cambridge University Press), 13.

[33] Ibid.

[34] Ibid., 152–156.

[35] Colin Gray, *Fighting Talk: Forty Maxims on War, Peace, and Strategy* (Washington, DC: Potomac Books, Inc.), 54.

[36] Deibel, 384.

[37] Gray, *Fighting Talk*, 51.

[38] Ibid.

[39] Ibid., 3.

[40] Stathis Kalyvas, *The Logic of Violence in Civil War* (Cambridge: Cambridge University Press, 2006). For a contemporary example that extends Kalyvas's argument, see Kevin Mazur, "Local Struggles in Syria's Northeast," *Washington Post*, September 9, 2014, available at <www.washingtonpost.com/blogs/monkey-cage/wp/2014/09/09/local-struggles-in-syrias-northeast/>.

[41] Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005).

[42] William Connolly, *A World of Becoming* (Durham, NC: Duke University Press, 2011). See also William Connolly, *The Fragility of Things: Self-Organizing Processes, Neoliberal Fantasies, and Democratic Activism* (Durham, NC: Duke University Press, 2013).

[43] Max Weber, *The Protestant Ethic and the Spirit of Capitalism* (New York: Routledge Press, 1930).

[44] Jon M. Chang, "Fighting the Syrian Regime: There's an App for That," ABC News, September 19, 2013, available at <http://abcnews.go.com/Technology/syrian-rebel-ipad-aiming-mortar/story?id=20296936>.

[45] Tom Nagorski, "Editor's Note: Blame Volcano for McChrystal Eruptions?" ABC News, June 27, 2010, available at <http://abcnews.go.com/International/gen-stanley-mcchrystal-icelands-volcano/story?id=11016455>.

[46] Ian Shapiro, *The Flight from Reality in the Human Sciences* (Princeton, NJ: Princeton University Press, 2005), 39.

[47] My current work seeks to develop a theory of political judgment that accounts for the problem of causality. This account applies abductive reasoning, which is normally written about as a scientific approach to hypothesis generation, to the realm of practice.

[48] Gray, *Fighting Talk*, 58.

[49] Colin Gray, *Defense Planning for National Security* (Carlisle Barracks, PA: U.S. Army War College Press, 2014), 15, 17.

[50] *2014 Quadrennial Defense Review* (Washington, DC: Department of Defense, 2014).

[51] Deibel, 243–252.

[52] A small sample of the literature includes Stathis Kalyvas, *The Logic of Violence in Civil War* (Cambridge: Cambridge University Press, 2006); Ana Arjona, "Civilian Resistance to Rebel Governance," Working Paper 170, Households in Conflict Network, February 2014, available at <www.hicn.org/wordpress/wp-content/uploads/2012/06/HiCN-WP-170.pdf>; Lars-Erik Cederman, Kristian Skrede Gleditsch, and Halvard Buhaug, *Inequality, Grievances, and Civil War* (Cambridge: Cambridge University Press, 2013); Barbara F. Walter, "Why Bad Governance Leads to Repeat Civil War," *Journal of Conflict Resolution* 59, no. 7 (2015), available at <http://jcr.sagepub.com/content/59/7/1242.full.pdf+html>; Paul Staniland, *Networks of Rebellion: Explaining Insurgent Cohesion and Collapse* (Ithaca: Cornell University Press, 2014); Peter Krause, "The Structure of Success: How the Internal Distribution of Power Drives Armed Group Behavior and National Movement Effectiveness," *International Security* 38, no. 3 (Winter 2013/2014), 72–116; Sarah Elizabeth Parkinson, "Organizing Rebellion: Rethinking High-Risk Mobilization and Social Networks in War," *American Political Science Review* 107, no. 3 (August 2013), 418–432; and Fotini Christia, *Alliance Formation in Civil Wars* (Cambridge: Cambridge University Press, 2012).

[53] Project on Middle East Political Science, available at <http://pomeps.org>.

[54] Rose, 231.

[55] Ibid., 3.

[56] Celestino Perez, Jr., "The Soldier as Lethal Warrior and Cooperative Political Agent: On the Soldier's Ethical and Political Obligations toward the Indigenous Other," *Armed Forces and Society* 38, no. 2 (2012), 177–204.

[57] Marc Lynch, "Can There Be an Ethical Middle East Political Science," *Washington Post* blog, July 3, 2014, available at <www.washingtonpost.com/blogs/monkey-cage/wp/2014/07/03/can-there-be-an-ethical-middle-east-political-science/>.

Marine currently embarked aboard littoral combat ship USS *Fort Worth* (LCS 3) performs sight survey on Jikdo Island, Republic of Korea, as part of training exercise during Foal Eagle 2015 (U.S. Navy/Conor Minto)

Strategy 2.0
The Next Generation

By Margaret M. Polski

The heart of the challenge is this: as we move into an uncertain future we must get better as we get smaller.

—General John M. Shalikashvili, USA

There is widespread concern and a great deal of collective hand-wringing these days about defense strategy. Seasoned observers will note that this is not a new problem. The environment that General Shalikashvili described in introducing the 1994/1995 Autumn/Winter issue of *Joint Force Quarterly* in the epigraph above is strikingly familiar 20 years later: conflicts in regions formerly at peace, the changing role of alliances and the range of situations in which we are called upon to use the military, the ambiguity and proliferation of threats around the world, and the ever-quickening pace of change in science and technology that nourishes competitors and substantially reduces the time it takes for a force to go from state-of-the-art to obsolescence.

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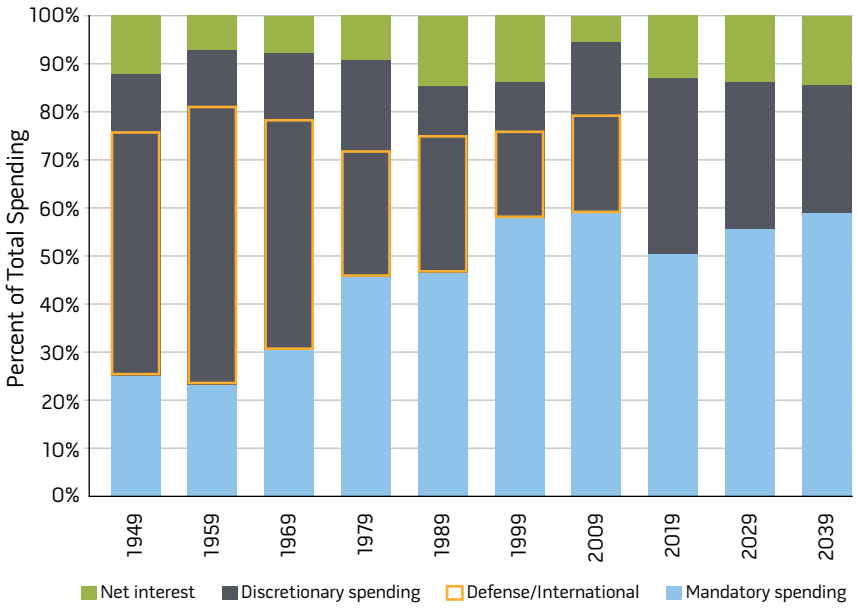
Figure. Budget Outlays: 1949–2039



Source: M.M. Polski and Sarah Nutter, "Truth and Consequences: A Guide to Understanding U.S. Government Debt and Deficits," Mercatus Center Working Paper No. 10-76, December 20, 2010.

Key: Net interest spending comprises interest payments on the Federal debt. Discretionary and defense international spending include all other Federal spending, including that on defense, foreign assistance, and transfers to local governments. Mandatory spending comprises payments to individuals under social insurance, pensions, and veteran benefits programs.

Moreover, in fiscal year 1995, the Armed Forces also confronted declining defense budgets and military resources. The figure shows that mandatory and net interest expenses have been fairly consistently crowding out discretionary spending since 1979. An analysis of current Congressional Budget Office projections leads us to expect that the next decade will look a lot like 1999: annual defense and international budgets are likely to average 13 percent of total budget outlays, or about 2.8 percent of gross domestic product, over the period 2016 to 2026.[1]

Nor have topical issues changed much since General Shalikashvili's tenure. The above-referenced issue of *Joint Force Quarterly* focused on a new defense consensus, Service identities and joint culture, civilian control of the military, information warfare, and joint operations in the civil war. It should be no surprise that strategic priorities top the list. Reflecting on strategic issues in his introduction to the issue, Shalikashvili argued that the Armed Forces were facing revolutionary challenges that required radical changes in how we think about, plan, and build our defenses. Over the course of his term as Chairman of the Joint Chiefs of Staff, General Martin Dempsey not only confronted similar circumstances but also appealed for innovation and transformation.

The call to innovate and transform falls squarely in the strategist's wheelhouse. But it is not entirely clear how a military strategy organization should respond to this demand. Some people quip that innovation in a military organization is an oxymoron, noting that it is extraordinarily difficult for large hierarchical organizations that dominate their area of operation in the near term to willingly transform themselves into revolutionaries.

To help address these concerns, the Center for Naval Analyses recently completed a comparative study of strategy activities in the Army, Marine Corps, Navy, and Air Force to identify common challenges, alternative approaches, and potential opportunities for change.[2] The following is a summary of our findings and further reflections on how the Armed Forces could nurture revolutionary change without compromising their ability to meet the not-so-revolutionary requirements of the near term.

One More Time: What Is Strategy?

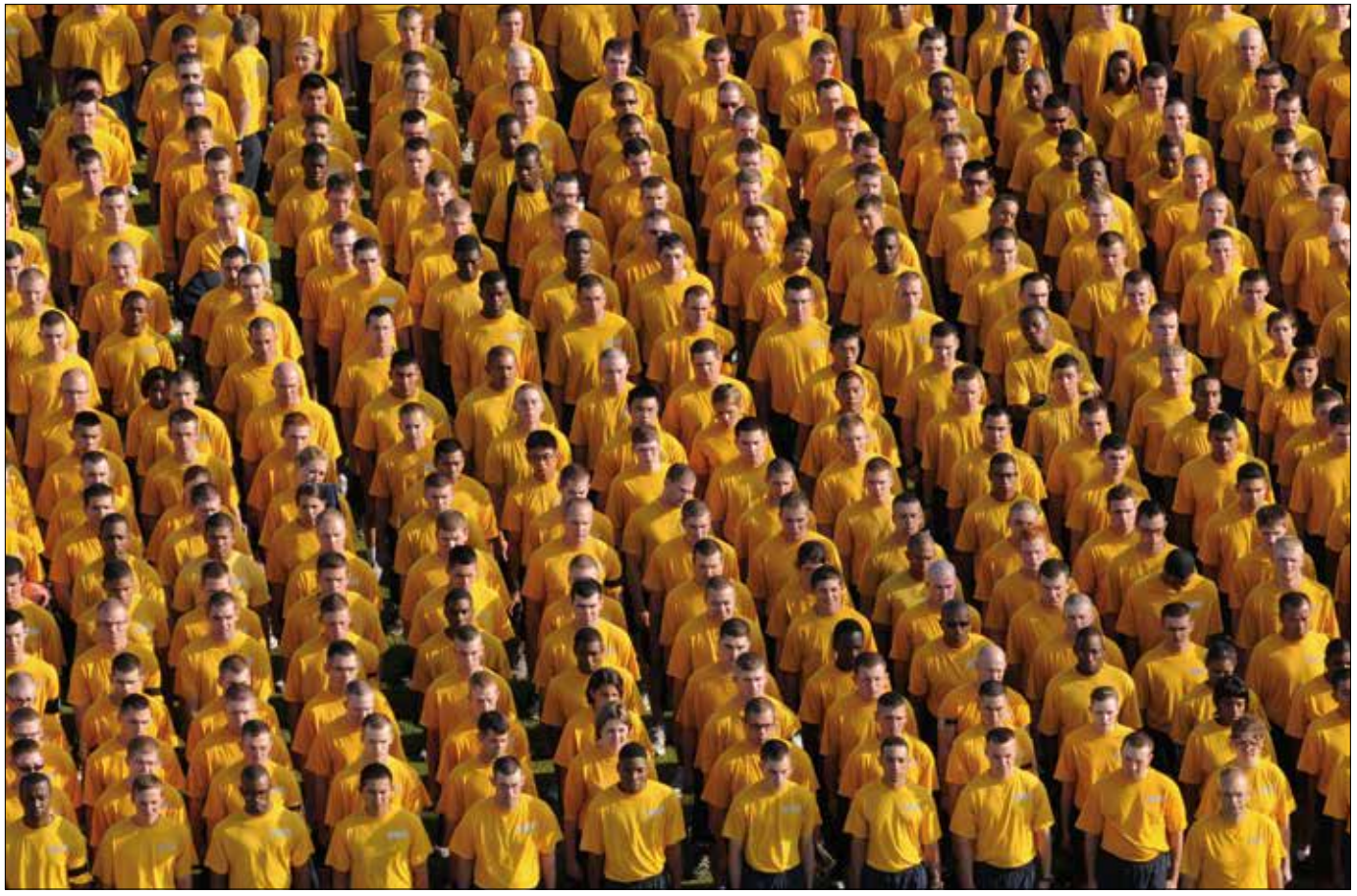
A well-trained analyst learns that he or she cannot study something with rigor until it has been defined. But as we learn from painful experience, definition is often one of the problems that plagues a sponsor's presenting challenge. And despite considerable reflection and extensive doctrine, military strategy is beset with definitional issues.

Joint Publication 3-0, *Joint Operations*, defines *strategy* as follows: "A prudent idea or set of ideas for employing the instruments of power in a synchronized and integrated fashion to achieve theater, national, and/or multinational objectives."[3] Among strategists, the typical shorthand definition has something to do with integrating ends, means, and ways to achieve national security objectives.

Our doctrinal definition would no doubt satisfy Carl von Clausewitz, who defined strategy as "the use of engagements to attain the object of the war," which is "a mere continuation of policy by other means."[4] Similarly, it is consistent with B.H. Liddell Hart's definition of strategy as "the art of distributing and applying military means to fulfill the ends of policy."[5]

While every strategist we met could recite some version of these definitions of strategy, we found quite a few who were dissatisfied with them. What most worries them is the tendency to conflate strategy and planning. Whereas planning is focused on operations, tactics, and effective execution, strategists prefer to focus on something grander that they just cannot quite put their collective finger on.

Turning to more modern texts for guidance, we consulted Lawrence Freedman's recent tour de force, *Strategy: A History*. With reference to history and drawing on studies in philosophy, military studies, social science, and management, Freedman ultimately characterizes strategy as the art of getting more out of a situation than the starting balance of power would suggest, or "the art of creating power."[6] Unfortunately,



Center for Information Dominance Corry Station oversees career management and training for officer and enlisted students of U.S. military and allied forces in fields of information warfare, information professional, cryptologic, and information technology, May 2011 (U.S. Navy/Gary Nichols)

Freedman's definition also fails to satisfy military strategists. But we liked the pithy approach, so whenever possible we asked strategists to complete the sentence: "Strategy is the art of . . ." While we found that strategists readily embrace the notion of strategy as an art and often like to talk about beginning with a blank canvas, this exercise failed to define that certain *je ne sais quoi* that strategists appear to strive for but cannot specifically articulate. After trying but failing to come up with a satisfying alternative, strategists default to doctrine.

In my view, the most interesting aspects of our findings regarding definitional issues are threefold. Foremost, none of the more than 75 military strategists we spoke with defined strategy with reference to rivalry or competition. Although some strategists worried that an emphasis on planning tends to obscure a realistic assessment of the environment or particular strategies, no one included rivalry or competition as a part of their definition. Yet Sun Tzu, whose classic treatise *The Art of War* appears on every professional military education strategy course syllabus, emphasizes the importance of "the art of the attack," which specifically involves understanding relative strength, perceiving intentions, and calculating strategic advantage.[7]

Second, while strategists intellectually understand that there is an interdependent and iterative relationship between policymaking, strategy, and planning that is reinforced in Title 10 authorities, there is a persistent and contradictory tendency to demand top-down guidance.[8] Many strategists complain that they cannot produce strategy if they do not have up-to-date national security strategy.[9] Some crave precise guidance on priorities and resources.[10] These demands, as we shall see in the findings that follow, undermine the potential value of strategy activities in the Armed Forces.

Finally, there is a tendency in the strategy community to focus on products and primers rather than analysis, vision, or effective processes. This is illustrated by a proliferation of strategies across the Department of Defense and the interagency community. Noting that the list is not all inclusive, Joint Publication 5-0, *Joint Operations Planning*, lists 15 additional sources of national strategic guidance beyond those produced in the joint planning system.[11]

There has been a similar proliferation of strategies within the Services. Service chiefs compound the problem when they task multiple units with strategy issues or create additional working groups without also creating a coordination mechanism to facilitate deconfliction, alignment, and communication. Strategists point out that less is more when it comes to strategy: too many strategies create strategic confusion, which ultimately decouples strategy from other critical processes.

Manpower Airmen work hand in hand with units and independent innovation working group to discover new ways to enhance Aviano Air Base's performance during time of dwindling resources, June 2015 (U.S. Air Force/Austin Harvill)

Common Challenges

Military strategists struggle with a number of other issues beyond definitional matters. Title 10 authorities and the peculiarities of American Federalism dictate that strategy has many masters. However, as some of our respondents ruefully pointed out, almost everyone likes to talk about strategy but few want to do it—particularly today. While each of the Services has unique strategic challenges, a number of common issues emerged in our study.

Not only has there been a proliferation of strategies and strategy activities, but also both strategy producers and consumers indicate that it is often difficult to distinguish between strategy to organize, equip, and train the force; warfighting; and organizational change initiatives. The current environment is producing weak and often conflicting signals for strategy and resource allocation. Current events in domestic and international environments, policy conflict, sequestration, pervasive crises, demographic factors, the volatility and restructuring of the global political economy, and innovation in science and technology create noise and rapid shifts in demand that make it difficult for strategists to keep up.

While some signal distortion is to be expected in an uncertain environment, we found that both strategy producers and consumers are asking fundamental questions that suggest a pervasive absence of strategic vision and leadership, such as "Strategy for what?" "Which strategy?" "What are our real priorities?" "How are resources tied to strategies?"

In what Yogi Berra would call "déjà vu all over again," we also found that each of the Services is reevaluating its "value proposition," or how it will contribute to joint warfighting now and in the future. While this kind of reexamination is painful to undertake, in my view it is to be expected after a decade of war, and it should be welcomed as we grapple with future requirements.

Meanwhile, strategists report that Service chiefs are focused on sustaining and defending near- and medium-term resources and capabilities and developing more efficient and effective organizations. Programmers rule while more strategy focused efforts to understand the implications of rapid advances in science and technology and the emerging capabilities and intentions of near-peer competitors languish.

Despite the obvious need for strategy, we found widespread concern across the Department of Defense about the quality of strategic thinking. Decisionmakers and planners are concerned that they are not adequately anticipating change in the environment and that professional military education is not keeping up with requirements.[12] Many feel that personnel management systems create incentives that inhibit strategy education, training, and career progression. Strategists complain about how strategy assignments and time out for education and teaching are treated in promotion decisions as well as the impact of the "up or out" rule in developing and retaining soldiers with critical knowledge and skills.

Finally, some strategists are concerned about the validity and reliability of current decision analysis tools and approaches. Potentially useful innovations that have been developed in defense research communities, which leverage advances in the computational and complexity sciences, have not been fully disseminated into strategy education and practice.

Taken together, these challenges indicate that key strategy functions, core competencies, and process are underdeveloped or poorly aligned.

Key Strategy Functions

Four types of functions emerged from our analysis of strategy organizations and activities across the Services: supporting decisionmaking, anticipating and shaping demand, meeting demand, and developing the next generation.[13] Key strategy functions are interdependent: activities and outcomes feed and reinforce each other. While each of the Services has efforts under way to improve strategy capabilities, we did not find any Service in which all four functions are fully operational or tightly integrated.

Functional activities that support decisionmaking include organizing and facilitating decisionmaking events, developing analyses and tools to inform decisionmaking, and making recommendations.

Activities associated with anticipating and shaping demand for strategy include collecting data; building networks of relationships; participating in internal and external analytical and decisionmaking processes; identifying and communicating patterns and trends; forecasting, wargaming, and engaging in other types of simulations, exercises, and experimentation; organizing inquiries and meetings; and producing innovative concepts or analyses that challenge prevailing thinking or practice.

Functional activities associated with meeting demand for strategy include responding to requests for strategic information or analyses, communicating about strategy, developing strategies, and organizing and participating in long-range planning processes.

Developing the next generation of strategists includes activities such as promoting the value of strategy and strategic practice; creating communities of practice; educating, training, coaching, and mentoring; and promoting capable strategists into positions of organizational authority and influence.

Core Strategy Competencies

We define *core strategy competencies* as sets of knowledge, skills, and abilities associated with successfully performing key strategy functions. We derived our list of core competencies by analyzing strategy careers; the types of activities that strategists reported performing; strategy organizations; linkages with other critical areas, such as budgeting, programming, and capital investment; and Service operating styles. Four core strategy competencies emerged from our analysis:

- qualitative, quantitative, and experimental analysis of patterns, trends, structure, and outcomes related to global competition, rivalry, and warfare; to complex physical and social systems; to strategically important industries, operations, organizations, and people; and to national security policies and programs
- program management and planning
- rhetorical skills (verbal and written communication and persuasion)
- knowledge of history, current affairs, and relevant policies, processes, systems, stocks, and flows related to budgeting, programming, force planning, and capital investment; to global politics, economics, business, finance, and governance; to diplomacy, development, finance, intelligence, and law enforcement; and to science and technology.

Tactical expertise is the foundation of military excellence in all the Services, but good strategists are visionary generalists: they are Jacks or Jills of all trades but masters or mistresses of none. No strategist can be an expert in all four areas of core competency. Instead, we found it imperative that they are familiar with each of these areas and can quickly and fearlessly identify and draw upon needed expertise. Strategists told us that it is important to effectively work across functions and organizations. To do so, they must have the skills to cultivate mutually beneficial relationships with counterparts, wherever they reside.

Our analysis suggests that the military strategy community may need further development in core competencies related to analysis; in professional program management and planning; and in its knowledge of budgeting, programming, force planning, capital investment, economics, business, finance, governance, and developments in science and technology.

Developing Strategies

Our analysis identified three types of strategy development processes: duty strategy, evolutionary strategy, and transformational strategy. Real strategy processes and products are classified. Duty strategy processes meet bureaucratic demands for strategy inputs that arise from routine planning processes or crises. Evolutionary processes meet the need to regularly review, update, and adapt existing strategies. Transformational processes meet the need to rethink and radically change the way that the Services will fight in the future. Duty and evolutionary strategy processes involve extensive coordination across functions and organizations. They rely on a consistent core group of trained and disciplined analysts with operational expertise, a well-defined organizational structure, and widely understood authorities and operating procedures. Typically, transformational processes are relatively short lived, expert led, and custom tailored to meet senior leadership needs. They look 30 to 40 years into the future and create alternative ways of promoting and defending vital interests.

We found good contemporary examples of duty and evolutionary strategy processes in the Services. However, there is a clear need across the Services to reduce the number of strategy products and to rationalize processes to better

Marines post security on patrol during Forest Light 15-1 at Oyanohara Training Area in Yamato, Kumamoto Prefecture, Japan (U.S. Marine Corps/Warren Peace)

integrate strategy with resource allocation and research and development activities.

Transformational strategy is a greater challenge and a pervasive need across the Department of Defense. We had to reach back in time to the Air Force's "mission-pull" strategy exercises in the late 1990s to find a tested process. Originally developed by the Office of the Secretary of Defense, the mission-pull approach involves specifying the long-term future security environment (30 years out) and disaggregating it into operating environments, missions, and critical tasks. Senior leaders create a future Service by imagining and debating several alternative concepts of how they will fight. Consensus around a particular vision provides the basis for evaluating competing resource requirements.[14]

Strategy process requirements depend on the type of strategy that senior leaders demand and on the larger organizational environment.[15] There is a great deal that strategists can do to shape demand for strategy; however, their influence is a direct function of senior leadership commitment and support. Even a high-functioning strategy organization cannot compensate for an absence of senior leadership receptivity and creativity. When leaders are unable or unwilling to think and act strategically, strategists can only soldier on, redouble shaping efforts, and prepare for opportunities to emerge from changes in leadership or the environment.

Implications and Concluding Thoughts

Our study has a number of implications for the Chairman, Service chiefs, and Department of Defense. First, regarding the debate about whether the strategy problem is a people problem or a process problem, it is clear that people, structures, and processes *all* matter. Our analysis suggests that capable people and strategic vision can be defeated by inadequate organizational structures and that inadequate people can defeat well-designed structures and processes. Current events and trends suggest that we need to ensure that we develop and promote highly competent strategists, rationalize strategy organizational structures and products, and undertake transformational strategy development processes.

Let us begin with people. Our analysis indicates that there is a significant risk that current investments in developing the next generation of strategic leaders may not align with key strategy functions and core competencies. The U.S. Armed Forces are a joint force, and this is not likely to change over the next generation. This means that strategy and the development of strategic leadership are a joint function. It is time to build a joint strategy community and to rationalize and align strategy education and training. While each Service must make its own determination about how it develops, coaches, and mentors future leaders, only those who can demonstrate joint strategic competence should be promoted to general/flag officer. Our lives and the future peace and prosperity of our country depend upon their strategic, operational, and tactical expertise.

Our organizational structures are a strategic nightmare. Federalism in a large and boisterous democracy such as the United States breeds polycentricism: many independent centers of decisionmaking and control.[16] However, the solution to marshaling these forces is not to centralize command and control; polycentric structures are difficult to penetrate, which can be a strategic advantage, and they are adaptive. What is needed to overcome the strategic disadvantages of polycentricism is better coordination, which is achieved by empowering capable people, reducing unnecessary activities, developing resilient networks, and implementing sustaining processes.

The way to go about improving joint coordination will be tedious but straightforward if the Chairman and Joint Chiefs are ready and willing to lead the way in making organizational change across the joint planning system and the Services. Efforts could begin immediately to:

- Rethink key strategy functions and make investments that focus on supporting and shaping decisionmaking about the long-term future of joint warfighting. What are strategists doing now that they should be doing, and how well are they doing it? What are strategists not doing that they should be doing? What are strategists doing that they do not really need to do?
- Ensure that investment in people and processes will continually develop

and sustain core competencies by identifying and mapping sets of critical strategy structures, process, products, and relationships; assessing resources against core competencies; and closing gaps.
- Rationalize duty strategy development processes, strengthen evolutionary processes, close gaps, and seek efficiencies and effectiveness.
- Better leverage existing resources to complement and augment capabilities and lay the foundation for the Chairman to implement a transformational joint strategy development process.

The 2015 leadership transition year was a critical moment for implementing change. Moreover, the current environment provides ample opportunities for the Joint Chiefs to innovate. However, successful organizational change management efforts require a disciplined process, team effort, strong senior leadership, and independent expertise. Internal personnel often do not have the time, experience, or interest to envision and implement change while attending to current responsibilities. And even welcome change involves addressing sensitivities and entrenched interests that are difficult for current staff to identify and manage. Independent analysts provide objective perspective and extra hands on deck to assist a change management team with process management, data collection, analysis, design, and implementation activities.

Cognizant of the challenges presented by the revolutionary changes he foresaw 20 years ago, General Shalikashvili provided guidance that is worth revisiting and updating to meet today's requirements. Arguing that we must hedge against the future, not the past, he urged us to take prudent risks and invest in resources for the future. His words provide a fitting conclusion for this article: "Yet we cannot retreat, we must go forward. I am confident that we will triumph in these revolutions and that our Armed Forces will remain the most formidable in the world." **JFQ**

Notes

[1] Author's compilation based on the Congressional Budget Office (CBO), *The Budget and Economic Outlook: 2015–2026* (Washington, DC: CBO, January 2016).

[2] We designed and conducted a modified data-driven business process analysis of how each of the Services was developing and aligning resources with strategy during the period October 2014 through December 2014. The goal of our analysis was to identify key strategy functions, core competencies, and examples of types of strategy organizational structures and processes. The study generated a high-level description of efforts under way in each of the Services to better align strategy with resource allocation. We did not assess the quality or value of Service strategies or strategy organizations and activities. A comprehensive analysis, which would include detailed business process mapping and analyses of resources, requirements, and performance, was beyond the scope of this study.

[3] Joint Publication (JP) 3-0, *Joint Operations* (Washington, DC: The Joint Staff, August 11, 2011).

[4] Carl von Clausewitz, *On War* (New York: Modern Library, 2000 [1832]), book II, chapter 1; book III; and book I, chapter 1 (24).

[5] B.H. Liddell Hart, *Strategy* (London: Faber and Faber, 1967 [1954]), chapter XIX.

[6] Lawrence Freedman, *Strategy: A History* (New York: Oxford University Press, 2013), xii.

[7] Sun Tzu, *The Art of War* (New York: Modern Library, 2000), chapters 1, 3. For an analysis and comparison of the differences between Western and Chinese military thinking, see Francois Jullien, *A Treatise on Efficacy: Between Western and Chinese Thinking* (Honolulu: University of Hawaii Press, 2004). Additional perspective is found in Fumio Ota, "Sun Tzu in Contemporary Chinese Strategy," *Joint Force Quarterly* 73 (2nd Quarter 2014).

[8] Service strategy organizations serve the chief and secretary. According to Title 10 and relevant doctrine and policy, the role of a Service chief and Service secretary includes advising senior leaders in developing and achieving realistic national security objectives; directing operational design, analysis, and planning; organizing, training, and equipping the force; providing appropriate doctrine, concepts, and operating instructions; allocating resources to achieve short-, medium-, and long-term objectives; and representing the Service in foreign and domestic security cooperation activities.

[9] We duly note the potential for strategic withholding among those who disagree with policy but are compelled to comply within the chain of command.

[10] Ibid.

[11] JP 5-0, *Joint Operations Planning* (Washington, DC: The Joint Staff, August 2011), figure II-3.

[12] We found that both the Office of the Secretary of Defense (Policy) and the Joint Staff J7 have undertaken analyses of professional military education (PME) to identify opportunities for innovation and reform. A 2010 House Armed Services Committee report was specifically critical of strategy PME: "Joint and Service efforts to cultivate military strategists are disassociated and producing mixed results. The committee recommends each of the Services carefully review and coordinate their PME efforts with the goal of educating qualified strategic decisionmakers, and that they should consider sponsoring additional junior officers for advanced degrees in top-tier civilian universities. These officers should be considered for command, staff, and faculty positions." See House Armed Services Committee No. 111-67, *Another Crossroads? Professional Military Education Two Decades after the Goldwater-Nichols Act and the Skelton Panel*, Hearing before the Oversight and Investigations Subcommittee, 111th Cong., 1st sess., May 20, 2009.

[13] We define a *function* as a core set of policies, procedures, and processes that enable people to carry out specific responsibilities associated with a particular area of organizational performance, such as strategy. Note that our focus in the cross-Service study was to identify functions, not to assess quality or performance.

[14] For a description of the mission-pull approach, see Clark A. Murdock, "Mission-Pull and Long-Range Planning," *Joint Force Quarterly* 6 (Autumn 1994/Winter 1995). We are grateful to Dr. Murdock, who helped the Air Force implement mission-pull in the late 1990s and early 2000s, for his generosity in sharing his experience and working papers. Dr. Murdock's book, *Future Making: Getting Your Organization Ready for What's Next* (Stevensville, MD: Murdock Associates, 2007), provides additional guidance and applications.

[15] The larger organizational environment for strategy includes authorities to act, history, culture, operating style, resources, initiatives under way, leadership transitions, events, fiscal constraints, and political cycles.

[16] For an analysis of polycentricity in American political and administrative life, see the work of Vincent Ostrom, including *A Political Theory of a Compound Republic: Designing the American Experiment*, 3rd ed. (Lanham, MD: Lexington Books, 2008); *The Meaning of Federalism: Constituting a Self-Governing Society* (San Francisco: Institute for Contemporary Studies Press, 1994); and "Polycentricity," a conference paper presented at the annual meeting of the American Political Science Association, Washington, DC, September 5–9, 1972, which is reprinted in *Polycentricity and Local Public Economies: Readings from the Workshop in Political Theory and Policy Analysis*, ed. Michael McGinnis (Ann Arbor: University of Michigan Press, 1999).

President Obama convenes meeting on Zika virus in Situation Room, January 2016 (The White House/Pete Souza)

Rediscovering the Art of Strategic Thinking

Developing 21st-Century Strategic Leaders

By Daniel H. McCauley

At a time when global instability and uncertainty are undeniable, the demand for astute American global strategic leadership is greater than ever. Unfortunately, tactical superficiality and parochial policies of convenience are undermining joint strategic leader development and the ability to operate effectively around the world.[1] Tactical supremacy and the lack of a peer competitor have contributed to strategic thinking becoming a lost art. This critical shortfall has been recognized for a number of years. General Anthony Zinni, USMC (Ret.), and Tony Koltz stated in their 2009 book *Leading the Charge* that leaders today have no vision and consequently have "lost the ability to look and plan ahead."[2] Trapped within rigid bureaucracies, today's joint strategic leaders immerse themselves in current operations, reacting to, rather than shaping, future events.

This strategic leadership shortfall is not unique to the military establishment. A 2014 leadership study conducted by the Palladium Group surveyed more than 1,200 companies in 74 countries. In this study, although more than 96 percent of the "respondents identified strategic leadership as an organizational 'must-have'

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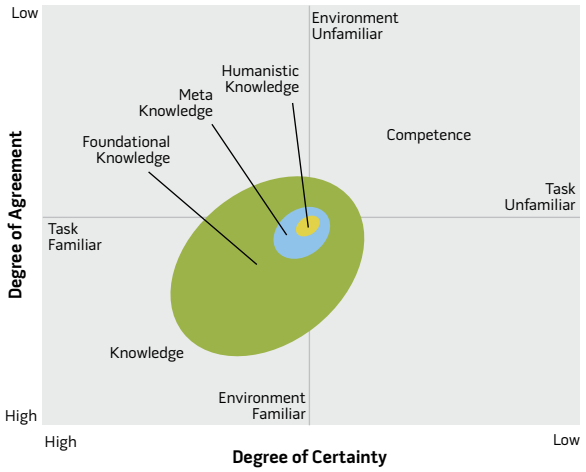
and a key to future success," over 50 percent of the respondents "stated that the quality of their organization's strategic leadership was unsatisfactory."[3] Fully two-thirds of the respondents serving in an organizational capacity as board member, chief executive officer, or managing director "did not believe that their current leadership development approach was providing the necessary skills to successfully execute their strategy."[4]

Obviously, there is a recognized strategic leadership gap across multiple disciplines, but how to remedy that shortfall has eluded both trainers and educators. The only certainty is that strategic leader development remains entrenched within the same development processes that are falling well short of the desired outcome. In an attempt to change this legacy thinking, General Martin Dempsey, USA, during his last 2 years as Chairman of the Joint Chiefs, issued white papers on mission command, the profession of arms, and joint education, as well as a memorandum on desired leader attributes. Each of these documents highlighted this shortfall in strategic leadership in some form.[5] The then-Chairman's direction, however, failed to change the approach to leader development in any meaningful way. Instead of designing a strategic leadership program to meet the demands of the 21st century, the military community continues to embrace the outdated practices of the past.

To rediscover the art of strategic thinking and planning, joint strategic leader development must disconnect itself from the paradigm of the past in which outcomes are known, risk is certain and manageable, and linear thinking is the norm. In its place, a developmental paradigm that embraces the discomforts of ambiguity, uncertainty, and complexity must be adopted. Modifying the training adage that the joint force must train the way it will fight, joint strategic leader development must reflect the realities of the global environment within which strategic decisionmaking occurs. Specifically, the joint force must develop strategic thinking competencies that will prepare strategic leaders for the ambiguities, uncertainties, and complexities of the 21st-century global security environment.

Figure 1. Industrial Age Skills



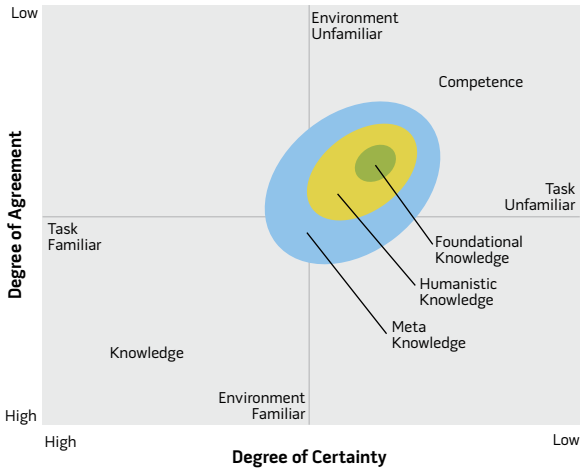
Strategic Leadership

Why are the Chairman and so many others focused on leadership? There are a number of reasons. First, local and regional trends, which were once somewhat isolated and constant, are interacting with global trends to accelerate rates of change. This increased acceleration leaves little decisionmaking time for cumbersome bureaucracies; rather, the environment demands timely strategic decisions at the field level. Second, the accelerated rates of change in local, regional, and global environments have increased uncertainty at all levels, paralyzing decisionmakers looking for risk-free strategies or plans. Third, as the world appears to grow smaller due to advanced communications and transportation systems, complexity actually increases because of the expanded numbers of stakeholders in today's interconnected global systems. Fourth, global interdependencies—economic, social, religious, and military, among others—demand that local or regional issues be viewed in a depth and breadth not previously undertaken.[6] Joint strategic leaders are reluctant to embrace security issues in their broader context even when the interrelated global security environment requires a long-term approach to do so. Finally, in a review of the lessons learned over the past 13 years of war, various organizations and studies assessed strategic thinking and strategic leadership as lacking during national strategic decisionmaking.[7]

These five reasons demand that joint officers develop a level of understanding not previously required from a national security perspective or demanded of them individually. This newly required depth and breadth of understanding entail the development of a perspective that encompasses longer periods of time—not only the present and near future, but also the distant past as well as the distant future. By drawing on an understanding of the past, joint strategic leaders can build a realistic vision that pulls joint organizations through the challenges of the present while positioning the Nation for future success. Without a vision of the future, the joint force is at a distinct disadvantage, as it will be caught unaware of developing trends, policies, and potential adversaries.

Strategic leader responsibilities generally encompass multiple organizations and echelons diverse in missions and responsibilities.[8] The interdependencies and interactions of the global environment have created a skills mismatch for joint strategic leaders over the past few decades. The current challenge is how to address the multitude of global challenges, given the limited range of individual and staff expertise and experiences. Considering figure 1, one can get a sense of the skill requirements necessary in the industrial

Figure 2. Information Age Skills



age. Generally, the degree of certainty of any given issue and the degree of agreement among experts for a solution (as indicated by the *x* and *y* axes) were fairly high. As such, knowledge—usually in the form of domain-specific experts—was foundational in developing an understanding of the issue. In most cases, both the tasks and the environment were familiar; thus, the need for different thinking methodologies (meta-knowledge) and cultural understanding (humanistic knowledge) was relatively small in comparison to foundational knowledge. If a problem was encountered, an expert was called in to "solve" it.[9]

Figure 2 illustrates the transposition of skills needed in the information age. Again, generally speaking, the strategic operating environment has expanded to include regions for which the United States has little or no expertise, with tasks becoming increasingly unfamiliar. As the degrees of certainty and expert agreement have decreased, the need for domain-specific foundational knowledge has significantly diminished. In the information age, meta- and humanistic knowledge come to the fore as the need to address the dynamics of integrated domains and multiple cultural perspectives increases. Specific foundational knowledge is decreased proportionally because collaborative approaches can potentially develop multiple solutions needed to address the complexities of integrated security domains.

Joint Leadership

Given the skills required of strategic leaders in the information age, it is necessary to undertake a short review of Service and joint leadership development and doctrine to identify the current strategic leadership shortfall. As expected, the Services do an excellent job describing leadership at multiple command levels. For example, Army Doctrine Publication 6-22, *Army Leadership*,[10] and the Air Force's Core Doctrine, Vol. II, *Leadership*,[11] provide definitions, purpose, competencies, and attributes required by leaders for conducting warfighting. Service leadership clearly formed the bedrock of American tactical and operational successes for many decades.

In his white paper titled *America's Military: A Profession of Arms*, General Dempsey further amplified this symbiosis between battlefield success and leadership, stating that the foundation of the military profession is leadership.[12] Unfortunately, unlike the focus the Services place on leadership, the joint community falls short. In lieu of leadership, joint doctrine relies on operational concepts, functions, and processes. For example, Joint Publication (JP) 1, *Doctrine for the Armed Forces of the United States*, does a very good job describing command and control within joint organizations.[13] However, it fails to describe the leadership differences that emerge as leadership and decisionmaking transitions from the joint task force (JTF) or component level to the combatant command, Joint Staff, and interagency levels. JP 1 does provide a short description of the profession of arms, listing character traits, competencies, and values, but these are relegated to an appendix not quite two-and-a-half pages in length.[14]

Recognizing this shortfall in joint doctrine and leader development, General Dempsey provided new guidance for the joint community based on a review of the past 13 years of war. In 2013, he laid out six desired attributes for leaders in a memorandum for Service chiefs, combatant commanders, the National Guard bureau chief, and the directors of the Joint Staff. These attributes assist the joint force in developing "agile and adaptive leaders with the requisite values, strategic vision, and critical thinking skills to keep pace with the changing strategic environment."[15] Coupled with the character, values, and competencies listed in JP 1, a leadership framework begins to emerge.[16]

Examining this framework, two issues become readily evident. First, the definition of joint leadership is missing. Second, the competencies as described in joint doctrine focus primarily on the tactical and low operational levels of war and fail to address strategic leadership in any form. Unfortunately, each of these missing pieces reinforces a tactical perspective of leadership at all echelons. Joint doctrine appears to assume that Service leadership development is adequate for strategic leadership despite recent evidence to the contrary.

As General Dempsey and others have noted, the required leadership skills can vary broadly depending on the level of operations. For example, most joint officers are familiar with their Services' roles and missions, having spent the majority of their careers in the tactical environment. This familiarity generally includes the types of organizations (for example, JTFs and components) and processes (for example, troop-leading procedures and the air-tasking cycle). At this level, complexity is limited because most interaction is at the individual or small group

Nepalese army ranger works with U.S. Army Soldier during Situational Training Exercise portion of U.S. Army Alaska Warrior Leader Course on Joint Base Elmendorf-Richardson, August 2015 (U.S. Air Force/Justin Connaher)

level, with decisionmaking measured in seconds, minutes, hours, or a few days.

The operational level of leadership expands complexity to include multiple organizations and the proliferation of the number and types of processes and products used. Reflecting this increased complexity, combatant commands operate at a different speed of decisionmaking to incorporate increased stakeholder views and desires. Combatant command regional and functional strategies and plans are complicated further by the needs of the individuals and organizations at the tactical level. The strategic level of leadership expands complexity to include the defense enterprise decisionmakers, such as the Secretary of Defense and Chairman. At this level, specific processes reduce in number, but the numbers of stakeholders, including allies and partners, increase across a broader range of domains, such as the economic and domestic domains. Decisionmaking can lengthen to months, years, or even decades. Finally, at the national strategic level, decisionmakers such as the President must deal with global complexity that involves decisions spanning the time range of each of the lower levels—seconds, days, months, and years.

Wherever one resides in an organization—whether at the tactical, operational, or strategic level, or some level in between—different leadership paradigms exist. To meet strategic leadership demands, the joint community must develop strategic thinking competencies. Strategic thinking is a cognitive process used to design and sustain an organization's competitive advantage.[17] It is a holistic method that leverages hindsight, insight, and foresight, and precedes strategy or plan development. Strategic thinking relies on an intuitive, visual, and creative process that explores the global security environment to synthesize emerging patterns, issues, connections, and opportunities.[18] Developing strategic thinking skills or competencies fills the strategic leadership shortfall while incorporating the desired leadership attributes identified by General Dempsey. Joint leader development thus becomes the vehicle that transitions the outdated military educational paradigm of the industrial age into one that serves the realities of the current information age environment.

Strategic Thinking Competencies

To reacquire the lost art of strategic thinking, seven competencies have emerged as vital for strategic leaders:

- critical thinking
- creative thinking
- contextual thinking
- conceptual thinking
- cultural thinking
- collaborative thinking
- communicative thinking.[19]

Cultivating these strategic thinking competencies can provide current and

Figure 3. Critical Thinking

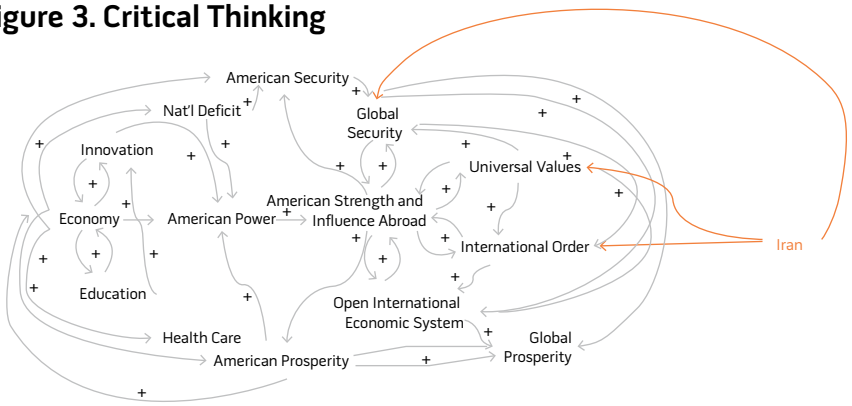
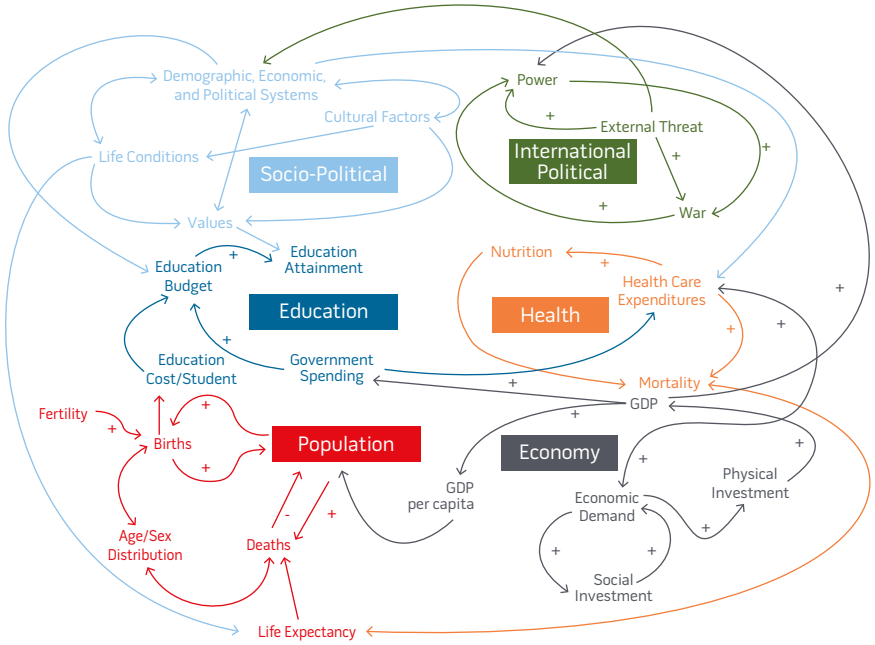


Figure 4. Creative Thinking: Iranian Systems Map



future strategic leaders with the skills necessary to develop and execute strategies and plans successfully.

The first competency, critical thinking, provides joint strategic leaders with a depth and breadth of understanding that leverage hindsight, insight, and foresight. Insight represents the ability to analyze a thing and break it apart to see how its individual components are related and work together. By breaking a thing down into its component parts, elements and relationships not usually visible or understood are exposed. To gain an appreciation of a system's current state, the past, including the environmental dynamics responsible for system creation, must be understood. The continued interplay of these dynamics provides additional system insights and aids in the development of foresight. Trend extrapolation provides strategic leaders with a temporal bridge between the past and present to the future. This extrapolation of both environmental change and constants aids joint strategic leaders in developing an understanding of what may lie ahead and in anticipating future events and subsequent plan development.[20] Understanding the possible, plausible, and probable futures of a system aids strategic leaders in shaping the current conditions into those that are more preferable.

When applying critical thinking to the global security environment, the sheer volume of information and potential actors is overwhelming. Two key tools of critical thinking that facilitate joint strategic leader understanding and enhance their organizational principles are systems thinking and visual thinking. *Systems thinking* is an approach that promotes understanding of events and behavior through the identification and understanding of underlying structures.[21] Viewed as systems, these structures are an organized set of elements interconnected in a way that achieves the stated purpose. Systems, therefore, have three components: elements, relationships, and purpose. System elements can be either tangible or intangible, although tangible elements are naturally more readily identifiable. System relationships or interconnections hold the elements together and represent the physical flow governing a system's processes. A system's purpose is not easily discerned because the formal stated function is often different from its actual purpose. So the best way to deduce the system's purpose is to observe it for a while.[22]

Visual thinking engages the unconscious mind[23] and is vital in problem-solving and modeling systems, especially ill-structured problems.[24] Visual thinking allows for the processing of enormous amounts of information across multiple dimensions,[25] adds clarity to communication, more fully engages group members, and enhances memory.[26] Visual thinking assists joint strategic leaders by increasing their ability to recognize patterns and similarities and to see formal and informal relationships.

An example of critical thinking that leverages systems and visual thinking is the international security challenge the United States faces with Iran. Critical thinking requires the strategic leader to undertake a historical analysis of the two countries to develop an understanding of the current grievances between them. A systems map, leveraging visual thinking, helps to illustrate the current U.S. national security system and how Iran is undermining it (see figure 3). National security interests and the intensity of

General Dunford gives remarks on leadership at *Wall Street Journal* Chief Executive Officer Council annual meeting, November 2015 (DOD/Dominique A. Pineiro)

those interests, along with key leverage elements, could be identified using a systems map. In addition, possible strategies or approaches to limiting Iranian influence are more easily identified, together with the associated first-, second-, and third-order effects. Systems and visual thinking enhance joint strategic leader critical thinking by portraying system complexity and interrelationships in ways that simple narratives or discussion cannot.

Solving globally complex security problems is the raison d'état of joint strategic leaders; unfortunately, finding enduring solutions is frustratingly elusive. Why is that? Typically, the same assumptions that created the problem continue to frame any potential approaches to solving it. As assumptions are the personal or organizational perceptual bedrock used to develop and sustain views of reality, the second strategic thinking competency, creative thinking, is needed to overcome this flawed perception. Creative thinking forces joint strategic leaders to challenge underlying assumptions, look for system patterns, view relationships and actors in new ways, take more risks, and leverage opportunities. Creative thinking uses the critical thinking tools of systems thinking and visual thinking to expose preexisting paradigms and develop new paradigms for developing and integrating new perspectives. Joint strategic leaders who can represent problems in as many ways as possible will ultimately achieve higher rates of success.

Systems and visual thinking tools enable joint strategic leaders to develop different perspectives of an opposing system. For example, creating a depiction of the Iranian socopolitical system might provide the strategic leader with new insights into why current policies or operations are not creating the desired results. Systems and visualization tools are particularly effective for gaining insights into complex, adaptive systems (see figure 4). Creative thinking leverages primarily critical and collaborative thinking.

The third strategic thinking competency is contextual thinking. Contextual thinking leverages the skilled judgment of the joint strategic leader by analyzing an environmental fact or situation as an individual part of a complex continuum rather than the outcome of a specific cause or influence. Contextual thinking assists strategic leaders in the development of a better understanding of the nature of social interactions and the effects on cognitive processing. In complex problems, when context is missing, meaning is lost. In the global strategic security environment, the multiple solutions, methods, criteria, and perspectives surrounding the ill-structuredness of the security issue must be conveyed,

not eliminated. Joint strategic leaders must then learn to sift through layers of context to identify those that are most relevant and important when solving problems.[27]

For example, in a typical military context, there is often a failure to differentiate between the strategic, operational, and tactical levels of war when discussing an issue. As we know, stakeholders and problems change depending on perspective. There are a number of questions that can be used to help frame context. What is the history of the issue? What was the strategic political and social context? Who were the actors? What was the central issue? What were the surrounding issues? Contextual thinking frames a point of common understanding for all stakeholders and participants. It leverages critical, creative, and conceptual thinking.

The fourth strategic thinking competency, conceptual thinking, is used by joint strategic leaders to understand a situation or problem by integrating issues and factors into a conceptual framework. Concepts, and the resulting maps, are the basis for human understanding and reasoning. Therefore, concepts are a form of knowledge structure that facilitates understanding.[28] Purposeful models help strategic leaders structure the exploration of a problem situation and are the most common means of initiating a comparison stage of problem-solving or understanding.[29]

When dealing with complex problems, conceptual thinking helps joint strategic leaders illustrate interrelationships, facilitating much-needed discourse. Complex systems must be conceptually simplified to make them understandable.[30] Conceptual thinking requires joint strategic leaders to be open to new ways of viewing the world, with a willingness to explore issues through alternative disciplines. Conceptual thinkers can effectively translate abstract thoughts to unfamiliar audiences. Conceptual thinking leverages critical, creative, contextual, and communicative thinking competencies.

The fifth strategic thinking competency is collaborative thinking, which creates synergy, improves performance, and motivates people to learn, develop, share, and adapt to changes. Collaborative thinking assists joint strategic leaders in developing synergy from stakeholders by openly sharing knowledge and experience, while acknowledging and affirming the same in others. Mutual sharing, respect, diversity, and equal participation that occur through high-order social learning, thinking, and communicating characterize collaborative groups.[31] Collaborative communication is the foundation of effective engagement, peak performance, and innovative outcomes; more importantly, it helps to develop and achieve common goals across national and institutional boundaries.

In today's global security environment, the joint force cannot claim expertise across the globe. Rather, joint strategic leaders must integrate stakeholders' deep understanding of their environments to find a heightened level of perception and new ways to think about issues. Collaborative thinking directly enhances critical and creative thinking and is influenced by cultural and communicative thinking competencies.

Cultural thinking, the sixth strategic thinking competency, is used to understand the interconnected world, incongruence of national borders, and synthesis of perspectives across a broad spectrum of cultures. Cultural thinking enables joint strategic leaders to understand a wider range of views and the beliefs, norms, values, and rituals associated with the global security environment. Enabled by information technology, the post–Cold War security environment collapsed into an intrinsically connected economic, cultural, and security global village. This interconnected world requires joint strategic leaders to understand that today's security environment is not only multipolar but also exhibits characteristics of cross-pollinated perspectives, ideologies, goals, and capabilities.

Within this global village, the costs of individual action have been intensified, with potentially substantial implications for the international security community. This new security reality has created a different ideological context that calls for international security responsibilities that go beyond individuals and nation-states.[32] Joint strategic leaders regularly face tough ethical challenges because of various cultural factors. The greater the complexity of the environment within which the joint force is operating, the greater potential there is for ethical problems or misunderstandings to exist. As joint strategic leaders become ethically attuned, they must learn to view the world through a variety of lenses, developing a personal sense of right and wrong, and to interpret the influences that affect individual and group behavior.[33] Cultural thinking leverages critical, collaborative, and communicative thinking.

The last strategic thinking competency is communicative thinking. Communicative thinking is used by joint strategic leaders to understand the various means and modes of communicating, as well as the challenges associated with communicating complex issues among individuals, organizations, societies, cultures, and nations. A strategic leader must be able to build a desired, shared vision for the organization and communicate that vision internally and externally to various audiences. Joint strategic leaders must conceptualize complex issues and processes, simplify them, and inspire people around them. In today's multicultural world, strategic leaders must be able to communicate across cultures as easily as they can communicate internally.

Joint strategic leaders must understand the cultural nuances of communication and be capable of communicating using multiple modes and methods, including blogs, tweets, written and oral reports, videos, storyboards, PowerPoint presentations, and formal and informal sessions. They must also be aware that communication occurs continuously and that it can occur nonverbally and through inactivity. Joint strategic leaders must understand that communication is a filtered, continuous, and active process and cannot be undone.[34] Communicative thinking leverages critical, collaborative, and cultural thinking competencies.

Recommendations and Conclusion

In the slower moving world of the industrial age, joint strategic leaders could plod their way through familiar tasks and concepts, developing solutions to a level of certainty most experts could agree on. In the fast-moving interconnected global security environment of today, however, strategic leaders do not have the luxury of time, task familiarity, or certainty. As a result, strategic leader competencies are needed more than ever. The difference between strategic leadership and "regular" leadership is that a strategic leader's responsibilities are far broader and deeper in scope. These responsibilities typically cross not only functions and domains, but also often encompass multiple organizations that have diverse roles and responsibilities.

As officers transition from the tactical to the operational to the strategic level, new skills and competencies are needed, and that is where strategic leadership comes into play. With unmatched tactical and operational skills, U.S. joint doctrine should not be changed to deemphasize this critical operational leadership focus. Rather, doctrine must be expanded to include strategic leadership to address the competencies needed for strategy and policy development. Given this understanding of the leadership environment, and lacking a current joint definition of *strategic leadership*, the following definition is proposed:

The interactive process of leveraging unique stakeholder capabilities in the pursuit of common and enduring national, partner, and alliance security needs by identifying and communicating the goals and objectives of cooperative and willing stakeholders, and influencing their attainment.

As Zinni and Koltz state in their book, the joint force needs officers who possess the requisite strategic thinking competencies demanded by both the current and the future global security environments.[35] Current joint doctrine focuses on the low operational and tactical levels of war, and is insufficient for the development of joint strategic leaders.

Joint officer development must change the paradigm of the past 50 years or so to acknowledge the new skills required as the world continues the transition from the industrial age to the information age. As the Chairman and others have identified, strategic leadership is a necessity for operating in the 21st-century security environment. This framework provides an approach to fill the leadership development shortfall in joint officer development, education, and doctrine. **JFQ**

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Staff Sergeant Russell Vidler, USA, leaps over wall at Fit to Win obstacle course on Fort Jackson, South Carolina, September 2015 (U.S. Army/Brian Hamilton)

Strategic Agility
Theory and Practice

By Charles H. Jacoby, Jr., with Ryan L. Shaw

As the combatant commander for the homeland, every day I contemplated the extant and emerging threats to our people, territory, and way of life. Defense of the homeland in depth was one of the strategic ends that I was charged with, and like the other combatant commanders (CCDRs) who are faced with sustaining U.S. leadership and protecting U.S. interests in a complex and dangerous world, I worked with my staff to find effective *ways* to employ available *means* in support of my assigned strategic *ends*. I also had responsibility for the accrued *risk*. This is the strategic calculus that all CCDRs must continually manage in the face of changing realities. In the homeland, the consequences of miscalculation come at the direct expense of our people and way of life.

For the North American Aerospace Defense Command and U.S. Northern Command, our ends are fixed, and they will not change. Obviously, we will never decide not to defend the territorial

General Charles H. Jacoby, Jr., USA (Ret.), commanded at every level of joint and Army service. Most recently he was Commander of Multi-National Corps–Iraq from 2009–2010; Director of Strategy, Plans, and Policies (J5) for the Joint Staff from 2010–2011; and Commander of North American Aerospace Defense Command (NORAD) and U.S. Northern Command (USNORTHCOM) from 2011–2014. Major (P) Ryan L. Shaw, USA, is a Strategist assigned to NORAD and USNORTHCOM. A doctoral candidate in history at Yale University, Major Shaw has commanded a cavalry troop in Operation *Iraqi Freedom* and taught history at the U.S. Military Academy at West Point.

integrity of the homeland. Nor will we give up on sustaining a peaceful international order, protecting universal values, or promoting global prosperity, and we will not break faith with our international allies. But it is equally certain that our means are contracting. Budget cuts and drawdowns are happening, and they will continue. This is a reality we have faced before, and we will manage it as best we can.

Unfortunately, this time we seem to have lost the conversation on risk. In our eagerness to put years of war behind us and to turn our resources toward other important projects, we are increasingly unwilling to be honest with ourselves about the level of risk we currently face and are willing to assume in the future. We frame the conversation in the absolute terms of winning and losing without asking the more relative question: "At what cost?" But the trust of our offices demands that we have that conversation, especially regarding the homeland.

With our ends fixed and our means in decline, we must confront risk—but we must also recognize our obligation to mitigate that risk by finding better ways to use our available means. Agility seems to be the currency with which we hope to buy better ways. This is not a new idea: from AirLand Battle in the 1980s to the 2012 Capstone Concept for Joint Operations, agility has long been a part of our operational concepts, but we have never defined it in our doctrine.[1]

Nevertheless, in this particular moment of strategic challenge, the idea of agility has more cachet than ever. In May 2014, the Secretary of Defense hosted the CCDRs for an offsite discussion of strategic agility while the Joint Staff J7 simultaneously hosted a Chairman-directed wargame to test concepts of global agility. The latest operating concepts for each of the Services prioritize agility in one way or another. Yet it still seems that we lack a common understanding of what agility means in the abstract and how we might cultivate it in our joint force. Given our current, hard-edged calculus of ends, ways, means, and risk, we need more clarity than that. This article hopes to advance the discussion by defining and analyzing agility, providing a conceptual model of how agility works in our system of national defense, and offering some thoughts on how we might increase our agility and therefore better balance the strategic equation in this period of national security vertigo.

The time is right for a deliberate look at agility. Our potential rival states are steadily increasing their investment in military capabilities at a rate not seen since the end of the Cold War, and they are demonstrating ever more assertive regional and global designs. Despite our years of effort and some real successes against al Qaeda, the terrorist threat remains and is retrenching in undergoverned spaces across the Middle East—a fact made plain in recent months by the rise of the Islamic State of Iraq and the Levant. The security of our homeland and our interests abroad is increasingly threatened by transnational criminal networks that traffic in narcotics, weapons, and other illicit goods, including humans. Our growing reliance on cyber and space assets makes us simultaneously more capable and more vulnerable. As a changing climate opens new approaches to the homeland and makes weather-related disasters more frequent, the demand for Defense Support of Civil Authorities continues to climb. Together, these developments mean that threats and challenges are less predictable, more diffuse, more globally interrelated, and less attributable than ever before. Meanwhile, our economy continues to struggle and our deficits increase. After more than a decade of wartime spending, our people and leaders are anxious to focus on real issues at home, even as we are forced to confront continued challenges abroad. Our budgets will not let us get bigger, and our threats will not let us do less. Agility seems to be the answer to this conundrum.

But if agility is to be more than just a buzzword, we need to give it some hard and deliberate thought. Our doctrine needs to comprehend a definition of agility and its component parts. We need to develop institutional and operational processes that promote agility. And as a foundation to all of this, we need a workable theory of agility.

Strategic Agility

Carl von Clausewitz defined a satisfactory *theory of war* as "one that will be of real service and will never conflict with reality."[2] A satisfactory theory of agility in war must meet the same criteria. Theory is useful only insofar as it reflects reality; reality cannot be remade to reflect our theory. And to be useful, a theory cannot be overly narrow—a theory of strategic agility cannot be incompatible with the common usage of the word agility, nor can it contradict agility at the tactical and operational levels. Academics discuss mental agility and business leaders pursue agile marketing and supply chain strategies, but the most common context in which agility is understood is in the physical domain of athletics. Even those of us who are neither athletes nor fans understand agility when we see it displayed on a field or court. Quite simply, the common usage of the word *agility* is in reference to athletics, so athletic analogies can be useful for communicating a theory of strategic agility.

Clausewitz further claimed that the "primary purpose of any theory is to clarify concepts and ideas that have become, as it were, confused and entangled. Not until terms and concepts have been defined can one hope to make any progress in examining the question clearly and simply and expect the reader to share one's views."[3] Toward that end, we offer the following definitions of agility. *Agility* is the capacity to respond quickly, effectively, and efficiently to a wide variety of unpredictable demands. More than mere strength, speed, power, or endurance, agility implies a capacity to employ any of these competencies individually or in combination and to switch between employment patterns to accomplish a goal with a minimum waste of time or energy. In the athletic realm, while sprinters are fast, running backs are agile; marathons demonstrate endurance, but parkour demonstrates agility; weightlifting demonstrates strength, but wrestling demands agility. In the context of military strategy, agility is the ability to identify and capture relevant opportunities faster than our rivals, to rapidly adjust

Commander of U.S. Strategic Command, Admiral Cecil D. Haney, and U.S. Air Force Chief of Staff General Mark A. Welsh III speak during strategic studies seminar at Eisenhower Executive Office Building, December 2014 (DOD/Sean K. Harp)

Table 1.

Agility	Physical Capacity
	Environmental Dexterity
	Decisiveness

priorities and shift resources to the main effort. We define *strategic agility* as our capacity at the global or theater level to rapidly assess complex and unpredictable security challenges and opportunities and to decide and respond quickly, effectively, and efficiently.

A sprinter, runner, or lifter may, in fact, be agile, but one could not know it by watching them compete within the predictable parameters of their respective disciplines. Similarly, we do not demonstrate agility by throwing resources against a predictable threat, no matter how great the threat or the magnitude of the resources. But agility allows us to promote and defend the Nation's interests in a complex and rapidly changing international security environment even with limited and uncertain fiscal resourcing.

Components of Agility

In any context, agility depends on the three components of physical capacity, environmental dexterity, and decisiveness.

Physical Capacity. While agility is not *merely* strength, speed, power, or endurance, those are all prerequisites, or enablers, of agility. The laws of physics still matter. To win through agility, one does not have to be the fastest or the strongest, but one does have to be strong *enough* and fast *enough*. The athletic application is obvious; for military power, this has to do with the hard facts of budgets, programming, acquisitions, and research and development, along with recruiting and training personnel.

Environmental Dexterity. Agility is never exercised in a vacuum; it happens in an environmental context. Indeed, as discussed above, the absence of obstacles or opponents negates agility as a relevant factor. Athletes apply agility on a course, court, or field; we defend the Nation across the hard geographic realities of land, sea, and air, in the developing domains of space and cyber, among varied human cultures, and against thinking and adaptive enemies.

Environmental dexterity requires both knowledge of the environment and the ability to shape and use it. A running back reads the defense, uses his blockers, and quickly changes direction based on an intuitive sense of the interface of his cleats with the turf. A parkour practitioner turns obstacles into opportunities by vaulting, jumping, or swinging in ways that increase rather than decrease momentum. For military purposes, knowing the environment requires sustained strategic intelligence and cultural acuity. We shape and use the environment

through Theater Security Cooperation (TSC) and Building Partner Capacity (BPC), through access agreements, prepositioned stocks, and the discriminating use of overseas basing and force rotations, which provide us with what Antoine Henri De Jomini called "pivots of operations" across the globe.[4]

Decisiveness. No amount of physical capacity or environmental dexterity can compensate for an inability to make decisions. Agility demands both the ability and the willingness to assess, decide, and execute in stride. This requires clarity of purpose (the running back knows that no matter how many times he changes direction, his aim is forward yardage), an appreciation of your own capabilities and limitations (how far can I jump? how fast can I run?), and courage (execute with conviction or fail). In national defense, these requirements translate to a widespread agreement on the national interest and a shared strategic vision or "theory of victory," which allow for a rapid consensus on relevant, emerging opportunities. Capturing those opportunities requires clear and appropriate authorities at all levels and strategic leaders with the courage to say "yes" or "no." At our best, we enable decisiveness through a culture of mission command—through decentralized execution and mission-type orders, through trust-empowered command and control (C2) and unity-of-effort relationships.

Our Agile System

These three components of agility—physical capacity, environmental dexterity, and decisiveness—map directly to three strategic-level components of our defense establishment.

Our *physical capacity* lives within the Services—Army, Marine Corps, Navy, Air Force—and the functional component commands (FCCs)—U.S. Strategic Command, U.S. Transportation Command, and U.S. Special Operations Command. It is built through the strategic acquisition of manpower and materiel and through tough, realistic, and consistent training. As force providers, the Services train and equip our combat formations. The FCCs provide the "backbone," the scaffolding that enables our global reach, and they develop and employ our strategic capabilities in space, cyber, and global strike.

Table 2.

Agility	Physical Capacity	Manpower	Services, FCCs
		Materiel	
		Training	
	Environmental Dexterity	Know the Environment	GCCs, FCCs
		Shape the Environment	
	Decisiveness	Clarity of Purpose	POTUS, OSD, JS
		Know capabilities and limitations	

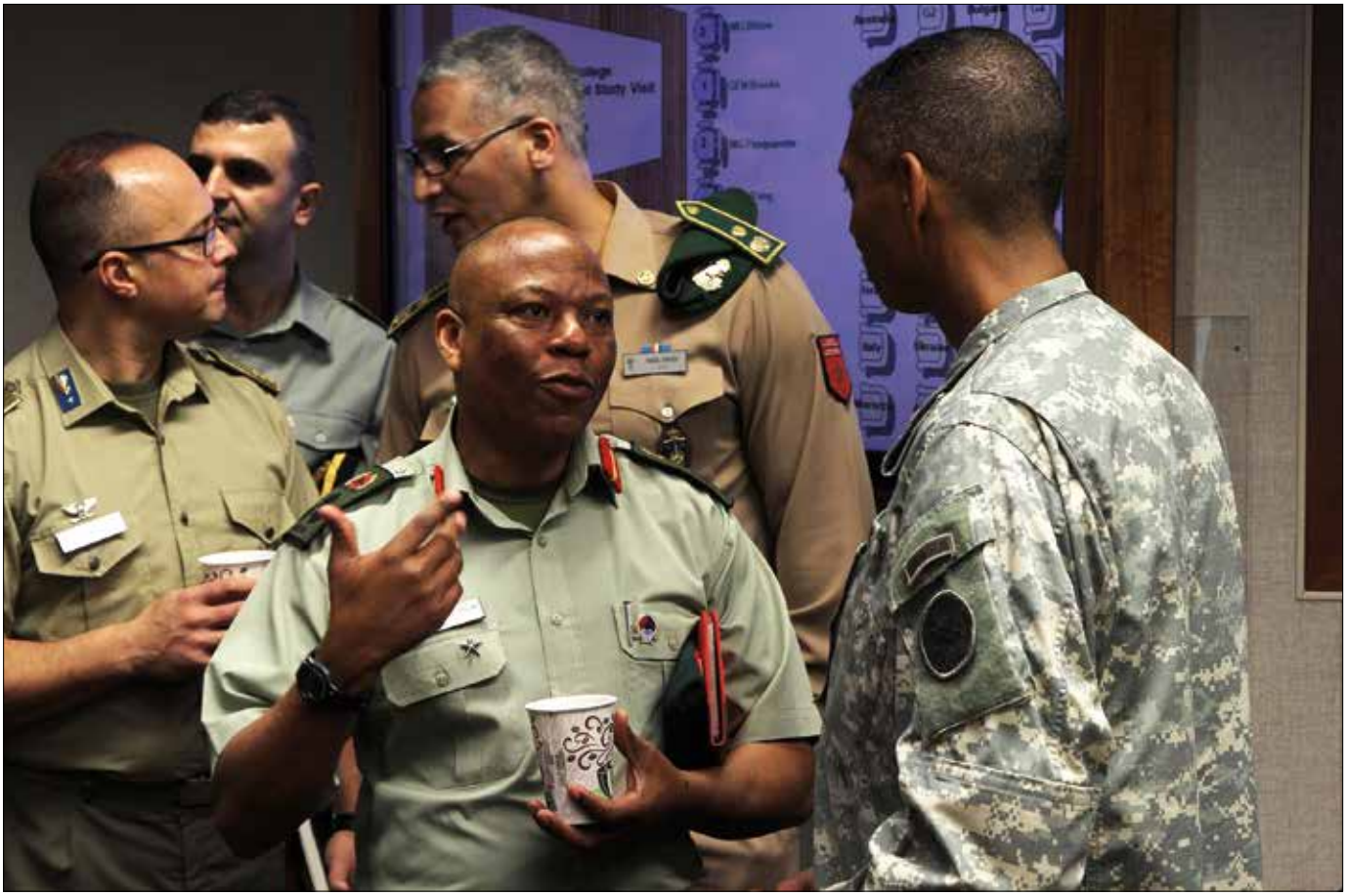
Geographic combatant commands (GCCs) provide *environmental dexterity*. With support of the FCCs, GCCs develop intelligence, refine cultural acuity, and maintain up-to-date strategic assessments. Through TSC and BPC, they shape the environment on a day-to-day basis during Phase 0 and Phase I. In coordination with the Department of State, GCCs earn strategic access for the Department of Defense (DOD); it is the long-term, steady-state engagement of the GCCs that facilitates rapid shifts of priority during crises.

While *decisiveness* is important at every level, for the achievement of global agility at the national strategic level, decisiveness is the purview of the Joint Staff, Office of the Secretary of Defense (OSD), and President. It is here that strategic ends are set, strategic priorities established, and strategic opportunities identified. It is here that a culture of mission command begins, and in a resource-constrained environment, it is here where hard decisions must receive "yes" or "no" answers.

Joint Publication 5-0, *Joint Operation Planning*, describes a proven process for identifying ends, setting priorities, and allocating resources at the strategic level. Through documents ranging from the National Security Strategy to the Joint Strategic Capabilities Plan, the President, Secretary of Defense, and Chairman of the Joint Chiefs of Staff provide strategic direction that enables the CCDRs to produce coherent theater strategies, campaign plans, and contingency plans.[5] When properly executed, this Joint Operation Planning Process (JOPP) enables effective and properly resourced steady-state activities across DOD during Phase 0, and efficient transitions to crisis action planning when necessary. In the words of the doctrine, "Clear strategic guidance and frequent interaction among senior leaders, Combatant Commanders, and subordinate joint force commanders promotes an early understanding of, and agreement on, strategic and military end states, objectives, planning assumptions, risks, and other key factors."[6] The product is a clear set of strategic priorities and a shared understanding of strategic risk. In other words, the JOPP is built to provide clarity of purpose and a clear understanding of capabilities and limitations, the first two components of the decisiveness required for strategic agility. The third component—courage—is a less tangible question, a moral one. As such, it cannot be programmed so deliberately.

The Moral Component

In our business, agility is only partly a physics problem—it is also a moral problem. We cope with the laws of nature and also the laws of human nature. Behind the questions of physical capacity and organizational processes there lies a question of trust. In fact, any experienced athlete or coach would agree that there is a moral component to competitive sports as well—if there were not, spectators and fans would not find it so compelling. But dealing as we do with the deeply moral questions of state-sanctioned violence, the lives of our sons and daughters, and the sacred obligation of defending American sovereignty and our way of life, this moral dimension is infinitely more important for the soldier than the athlete—more critical,



Ugandan Brigadier General Apollo Kasiita-Gowa talks to U.S. Army Pacific Commanding General, General Vincent K. Brooks, during U.S. Army War College International Fellows program's visit where 39 participants received firsthand experience on strategic-level leadership and national security challenges (U.S. Army/Kyle J. Richardson)

Table 3.

Organizational Agility	Individual Agility	Physical Capacity
		Environmental Dexterity
		Decisiveness
	Trust	

in fact, than the physical components. As Clausewitz wrote of the moral component, "Theory should only propose rules that give ample scope to these finest and least dispensable of military virtues, in all their degrees and variations."[7]

We have one of the few forces in the world that will reliably close with and destroy the enemy. This is based on a courage born of trust. The rifleman will move forward to the objective because he has absolute confidence in the soldiers to his right and left, that the logistician will find a way to support him when he gets there, and that a medic will be there to drag him from the field if he becomes wounded. This is tactical courage based on tactical trust, but the culture of trust always has started and always must start at the top, and it is sustained reciprocally with the faith of our people.

Across the Total Force—across all Services, Reserve Components, and National Guard—we must be able to believe that we are all working toward the same ends. We cannot be agile if some of us are prioritizing job security over national security—or even if it seems that we are. And we cannot be agile if we confuse means with ends; the combatant commands have to know that their interactions with the Joint Staff will be governed by the prerogatives of our national strategic ends, not by Service parochialism, the equities of a particular staff section, or the "job jar" of a given duty description. Likewise, when the uniformed force interacts with the civilian leadership at OSD, the civilians must be confident that they will receive unvarnished professional military advice based on the needs of the Nation, not the parochial interests of a Service or component, and the military must be confident that that advice will be received in good faith and incorporated into decisions fully in our best long-term security interests. This is never easy, but it all becomes much more difficult as budgets get tighter.

Physical competence, environmental dexterity, and decisiveness, together with the added moral component of trust, comprise a model of agility that applies

to athletics and to any other meaningful application of the word, including the tactical, operational, and strategic levels of war. In fact, it applies to individual military leaders as well. Agile organizations demand agile leaders, and we encourage leaders and leadership theorists to examine the utility of this model at the individual leader level. But the focus of this article is the corporate agility of our national strategic-level defense enterprise. What follows are some initial thoughts about our present level of agility and our possibilities for improvement.

How Can We Be More Agile?

First, do no harm. Six competitive advantages have sustained American military preeminence for many decades. We must sustain these at all costs, whatever challenges lie ahead. We must not allow them to be broken, either by sins of commission—from an eagerness to change just for the sake of change—or omission—from neglect for lack of resources. We should frame our strategic choices in terms of their effects on these six. Three of these competitive advantages feed our physical capacity: the all-volunteer force, our defense industrial base, and our tradition of excellence in exercises, education, and training. Two of them have to do with our environmental dexterity: our international alliances and our time-tested strategy of defending forward. And one—our culture of jointness and civilian control—enables our decisiveness and is built on trust.

Physical Capacity. For the last quarter century, we have enjoyed a tremendous advantage in physical capacity over any potential rival. With downsizing an imminent reality, we must be careful to remain big *enough*, strong *enough*, and fast *enough*—not just to win, but to do so without violating our moral imperative to minimize the risk to American lives. We must sustain our dominance in strategic lift; intelligence, surveillance, and reconnaissance; global strike; and the special operations forces enterprise—the backbone that enables our agility. And we must build and maintain resilience in the cyber and space domains.

Even in an era of tight budgets and reduced acquisitions, we must keep faith with our partners in industry to maintain the on-demand capacity of our industrial base. We have to find a way to sustain readiness in our combat formations through tough and realistic training and exercises, and when we are down to our last dollar, we should spend it on professional military education.

Sustaining the competitive advantage of our all-volunteer force means we have to keep faith with our veterans and care for our families, ensure we maintain adequate and predictable compensation packages, and manage talent within the force to make a career of military service both personally and professionally rewarding. The early phases of this drawdown have generated much discussion and warning of a "hollow force." By this we usually mean that we should not try to sustain a force structure larger than what we can adequately train and equip. But that is only part of it—the hollowest of forces is the force that does not have or does not understand its mission. We will only sustain vitality in our all-volunteer force if leaders at all levels communicate to their formations the essential role of their mission in the Nation's defense strategy—and leaders can only do that if the strategy has an essential and clearly defined role for each of those formations.

Environmental Dexterity. In the quest for greater agility and lower expenditures, there has been much discussion of reorganizing the combatant commands. With every budget cycle, we see a renewed proposal to reduce the number of GCCs, usually by re-absorbing U.S. Africa Command into U.S. European Command or by combining U.S. Northern Command and U.S. Southern Command. Recent think-pieces have proposed hybrid or flexible C2 arrangements, organized against specific global threats rather than by geographical areas of responsibility. While it is true that each problem set is unique and many of today's threats recognize no political or geographic boundaries, it remains the case that we buy agility for Phases I–V with our investment in knowing and shaping the environment in Phase 0. The GCCs, with our country teams under the guidance of the State Department, build and maintain trust as the face of America in our longstanding alliances, and they are the physical embodiment of the forward defense strategy that has served us well since 1917. Power politics, nation-states, and relationships still matter; they happen in geographical space, and managing those relationships within that space is expressly the role of the GCCs. As long as *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense* is still our strategy, and if greater agility is what we want, we should redouble that Phase 0 investment, not cut it. The Army's Regionally Aligned Forces concept, if properly defined and executed, could be an important step in that direction. Because the GCC construct is not broken, we should not try to fix it.

Table 4.

Competitive Advantages

- The All Volunteer Force
- The Defense Industrial Base
- Exercises, Education, Training
- International Alliances
- Defend Forward Strategy
- Jointness & Civilian Control

Decisiveness. As discussed above, the JOPP does provide us with the tools we need to conduct effective shaping operations in Phase 0 and to plan for the contingencies we foresee; it does set the conditions for agility—but only if we use it correctly and adapt it as required.

Each of the system's products is essential to the production of the others, so they each must be produced on time and to standard. In this sense, the agility required to manage the unexpected demands some degree of predictability in our processes. Working backward in time, a GCC cannot transition well to crisis action if it does not have the right contingency plans. Those contingency plans must be nested with the Theater Campaign Plan, all of which must be nested with the endstates prescribed and the resources allocated in national strategic guidance, particularly the theater endstates in the Guidance for Employment of the Force (GEF) and the resource allocation in the Global Force Management Implementation Guidance

Secretary Carter answers Sailor's question during troop event at Naval Base San Diego, California, February 2016 (DOD/Tim D. Godbee)

(GFMIG). It would be an inappropriate overreach for the combatant commander to write a plan that pursued endstates other than those prescribed by the GEF or that depended for success on resources not made available through the GFMIG. It is likewise—and equally—an awkward overreach and a violation of the mission command philosophy for OSD to produce a GEF that prescribes objectives, rather than endstates, in an effort to avoid tough decisions about resource allocation. This amounts to a bureaucratic sleight of hand to conceal risk when what we really need is a more honest conversation between the Secretary and the combatant commanders, the principals who actually own the risk. The first thing we can do to improve our agility is to use the system we have in the way it was designed.

Recent conversations about strategic agility and the related concept of dynamic presence have focused on the role of the Chairman. The Joint Staff has the trappings of a general staff and we frequently treat them like one, but the Chairman—by design, as the principal military advisor to the President—has no command authority. This makes it difficult to reallocate resources between GCCs during Phase 0. Some argue that we could increase our agility by investing the Chairman with real command authority. But that would be a fundamental departure from the time-tested arrangement of the National Command Authority, which we should not undertake without serious consideration of how it would affect the Chairman's advisory role. In any case, reallocating resources between theaters during Phase 0 represents a departure from approved Theater Engagement Strategies and a reprioritization of our commitments to our alliances; that *should be* difficult. Under the present arrangement, it takes true escalation of a real security crisis to engage the Secretary to reprioritize, but we owe it to our allies not to reprioritize for anything less.

The drawback of the current system is that synchronization of contingency plans between combatant commands happens only in an ad hoc, nonbinding, and independent manner, and the Services—the force providers—are only indirectly accountable to the commanders who employ those forces. We can do better than this. We should adapt to the reality of globalized threats with a process for the global synchronization of contingency plans for Phases I–IV while enhancing the assurance function in Phase 0 with appropriate and reliable steady-state force allocation.

It must also be said that we cannot plan for future agility in the absence of clear resource guidance in the Federal budget. As commissioned officers in the Armed Forces, we took an oath to obey the lawful orders of the President. A signed budget is just such an order,

and we will obey them when they come whether we like them or not. But recent budget battles and the calamity of sequestration represent an absence of coherent orders, which results in strategic paralysis—the opposite of agility. When we are denied the ability to decide and act strategically, the best we can do is to decide and act morally—to prioritize the readiness of the Soldiers, Marines, Sailors, and Airmen whom we send into harm's way and do our best not to break those six competitive advantages. That is nonnegotiable, but it comes at the cost of future agility. And the ongoing budget negotiations—the attempts to protect pet projects for key constituencies against the best military advice of our senior leaders—threaten even our ability to provide for that readiness and maintain those advantages. Part of the decisiveness required for strategic agility must come from our elected leaders.

This speaks to the larger question of civil-military relations, which inevitably affect our decisiveness and are presently under real strain. In 1957, Samuel Huntington claimed, in *The Soldier and the State*, that military professionalism was best promoted and preserved by what he called an objective model of civil-military relations.[8] In contrast to the politicized military of subjective control, objective civilian control seeks to insulate the military from politics as much as possible, allowing them to develop expertise in the management of violence on the battlefield while the politicians develop and exercise a separate expertise in policy, strategy, and diplomacy. Huntington's book became the standard in the field, and it remains the starting point for discussions of civil-military relations at the academies and war colleges today. His preference for objective control has thus become an article of faith.

Even in 1957, though, Huntington was clear that objective control was an aspirational rather than a descriptive idea. The Founders made the American military subordinate to the President, who is the commander in chief, but accountable to Congress, which raises it, funds it, and authorizes its employment. This requirement to provide military advice to two branches of government that are designed to check and balance each other inevitably draws senior military leaders into political controversy. As a recent reviewer tells it, "Huntington suggests that as a result of this constitutional arrangement, his objective form of civil-military control is literally impossible in the United States."[9] Since Huntington's writing, the effect of military policy domestically and of American foreign policy internationally has grown more consequential, and our recent ventures in stability operations and nation-building abroad demand greater political involvement than other forms of military operations. Our system was designed to make military professionalism hard, and it is only getting harder.[10]

But this makes professional military advice and a professional military ethic more important, not less. Though we never will completely, we are all obligated to try to live up to Huntington's ideals of professionalism and objective control. Senior military officers—active and retired—should aspire to provide their best military advice and to leave politics to the politicians. Likewise, the deeper that partisan politics are allowed to reach into the uniformed Services, the more military professionalism is compromised. Frankly, the sheer size of OSD, with a civilian counterpart for every desk at the Joint Staff and every directorate at the combatant commands, and with political appointees proliferating deeper into the organization at the expense of the professional staff, ensures that politics will reach very deeply indeed. Any continued efforts to resize DOD should look at trimming OSD to save not just money, but also our tradition of civil-military relations.

Civil-military challenges, born from constitutional checks and balances not only within the Federal Government but also between the Federal and state governments, also affect each of the elements of strategic agility. Almost by design, our Total Force system creates tension between the Federal components (both Active and Reserve) and state forces in the National Guard. Federal forces accountable to the President as commander in chief and state forces accountable to their respective governors are likely to have different priorities regarding funding, structure, and readiness issues based, according to the dominant interpretation of Huntington's theory, on different imperatives influencing their professional military ethic. This potential conflict between components with different pathways of accountability is in essence a political conundrum between levels of government. While it is appropriate to consider the prerogatives of each of the components when shaping the Total Force, our model of strategic agility would dictate that, for both the integrity of the process and the efficacy of the product, the requirements for national security and global agility should take priority over the interests of individual components.

The Moral Component. Courage—and the trust that is both its cause and its effect—cannot be budgeted for. It cannot be legislated into being, designed in a lab, or built into an organizational process. It can only be demonstrated by example and promulgated by practice. It is tough to build and easy to lose.

Fortunately, just as we have inherited an overwhelming physical capacity and a proven institutional process, we have inherited a longstanding American tradition of courage and trust in the service of our nation. Despite our flaws and our missteps, the American people continue to trust their military Services—as evidenced by the fact that they are still willing to contribute their best and brightest to our ranks. They will continue to give us that trust as long as we continue to earn it. It is the trust we have built with each other that has enabled us to develop, over the last several decades, a culture of true jointness that is the envy of militaries across the world. Our civil-military relations have not always been happy, but happiness is necessary neither as a prerequisite nor as a product of that relationship. Trust, however, is necessary. We have always been at our best when there was trust sufficient to the mission, and historically, our failures have involved a deficit of trust. Do we have sufficient trust now?

This moral component of agility is ours to lose. To retain it, we only have

to live up to the highest ideals, laws, and traditions of our American profession of arms. As we face the difficult choices ahead, let us maintain faith with the American people and with one other, and let us renew our determination not to lose it.

Conclusion

Any attempt to move the recent focus on agility—which has been earnest, if poorly defined—from mere words into meaningful action implies three possibilities: We must either make some changes to gain the agility we now desperately need, or work to preserve the agility we have and must retain, or debunk agility as the coin of the realm every time we face a budget cut and admit that agility either is not what we want or is too hard to achieve. We argue that agility *is* the right approach for our future national security strategy. From our perspective, we have the baseline components for agility, and we only need to capitalize on them in a deliberate way, but we can also make some substantive changes to improve our agility moving forward.

In constructing his theory of war, Clausewitz recognized that the military was only a part of the equation. "As a total phenomenon," he wrote, "its dominant tendencies always make war a paradoxical trinity" comprising the army, the government, and the people. "A theory that ignores any of them or seeks to fix an arbitrary relationship between them would conflict with reality to such an extent that for this reason alone it would be totally useless. . . . Our task therefore is to develop a theory that maintains a balance between these three tendencies." Likewise, in attempting to construct a theory of agility, this article looks beyond just DOD, our equipment, and our processes to examine the moral dimensions of agility that arise from our dynamic relationship with our government and our people, which lives in tension "like an object suspended between three magnets."[11]

The hope is that doing so allows the construct presented here to "be of real service and . . . never conflict with reality." Beginning from the commonly understood concept of agility in athletics, this construct of physical capacity, environmental dexterity, and decisiveness, plus the moral component, is equally applicable to all other meaningful uses of the word, including the tactical, operational, and strategic levels of war. It is further hoped that the specific recommendations for increasing our strategic agility will at least spur honest discussion and help move the idea from an abstract buzzword to a real focus of our defense strategy. The task ahead is to incorporate agility into our doctrine, adapt our processes to promote it, and recommit to a professional ethic of courage based on trust. **JFQ**

Notes

[1] Agility was one of the four tenets of AirLand Battle doctrine, which approached a definition but was focused primarily at the tactical and operational levels and did not usefully distinguish agility from speed: "Agility emphasizes the ability of friendly forces to act faster than the enemy." See "Doctrine and Concepts" in *Department of the Army Historical Summary: Fiscal Year 1989* (Washington, DC: U.S. Army Center of Military History, 1998), 46, available at <www.history.army.mil/books/DAHSUM/1989/CH4.htm>. A recent Joint Staff product does better on both counts with a focus at the geographic combatant command (GCC) level, defining *GCC agility* as the "ability to rapidly shift focus and forces to other emergent challenges in the AOR [area of responsibility]." See Deployable Training Division J7, *Insights and Best Practices Focus Paper: Geographic Combatant Commander (GCC) Command and Control Organizational Options* (Washington, DC: The Joint Staff, March 2014), 10, available at <www.dtic.mil/doctrine/fp/fp_gcc.pdf>.

[2] Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976, 1984), 142.

[3] Ibid., 132.

[4] Baron De Jomini defined *pivots of operations* as "practical temporary bases . . . a material point of both strategic and tactical importance that serves as a point of support and endures throughout a campaign." Antoine Henri De Jomini, *The Art of War*, *Special Edition*, trans. G.H. Mendell and W.P. Craighill (El Paso, TX: El Paso Norte Press, June 2005), chap. III, art. XX, 98.

[5] Joint Publication 5-0, *Joint Operation Planning* (Washington, DC: The Joint Staff, August 11, 2011), xiii, fig. II-1, II-5.

[6] Ibid., x.

[7] Clausewitz, 86.

[8] Samuel P. Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge, MA: Belknap Press, 1957, 1981), 80–85.

[9] Dayne E. Nix, "American Civil-Military Relations: Samuel P. Huntington and the Political Dimensions of Military Professionalism," *Naval War College Review* 65, no. 2 (Spring 2012).

[10] Ibid.

[11] Ibid., 89.

Sailor and Marine with 3rd Marine Regiment brace as CH-53E Super Stallion with Marine Heavy Helicopter Squadron 366 takes off from Marine Corps Air Ground Combat Center, Twentynine Palms, California, July 2015 (U.S. Marine Corps/Owen Kimbrel)

Sustaining the "New Norm" of Jointness

By Case Cunningham, Patrick Donahoe, Mike Jernigan, and Michael Riggins

Today's Joint Force is a highly experienced, battle-tested body of men and women, with a decade of practical, focused warfighting knowledge. . . . We must learn and properly place in context key lessons of the last decade of war and in doing so, we will prepare our leaders for what is ahead.[1]

—General Martin E. Dempsey
18th Chairman of the Joint Chiefs of Staff, 2012

On May 25, 2011, a platoon from the U.S. Army's 1st Battalion, 133nd Infantry Regiment, was ambushed near the village of Do Ab, Nuristan Province, Afghanistan. An estimated force of more than 300 Taliban engaged the small unit. As mortars and rocket-propelled grenades exploded around the Americans, two U.S. Air Force joint terminal attack controllers (JTACs) contacted a U.S. Air Force MC-12 tactical reconnaissance aircraft to relay requests for air support to other aircraft. While the Soldiers fought the Taliban, who outnumbered them roughly five to one, the JTACs directed fires from Air Force F-16s, F-15Es, and AC-130s; Navy F/A-18s; and Army AH-64s and OH-58s. The battle raged for 12 hours before the Taliban abandoned their attempts to overrun the platoon. More than 250 enemy forces were killed during the engagement. No American lives were lost.[2]

This short vignette is just one of many examples of the power of joint cooperation in combat operations. Whether through the synergistic employment of Service capabilities, as a result

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Sailors direct F/A-18C Hornet from Strike Fighter Squadron (VFA) 83 on flight deck of USS *Harry S. Truman* (CVN 75) in U.S. 5th Fleet area of operations in Arabian Gulf, February 2016 (U.S. Navy/Lindsay A. Preston)

of individual augmentee assignments supporting another Service's efforts, or through experience serving on joint warfighting staffs, the officers of today's American military are arguably more joint than in any other time in the Nation's history. With U.S. forces in Afghanistan drawing down substantially, the best way to sustain this "new norm" of jointness is to bring these lessons to the junior officer and company-grade professional development programs of each Service. This article argues that giving junior officers more joint experience, education, and training opportunities earlier in their careers will accelerate this joint experience endowment and increase the combat effectiveness of the joint force.

The current American tradition of joint warfare came about as a direct result of the failed rescue attempt in 1980 of 53 Americans held hostage in Iran and the difficulties realized in joint operations during the 1983 invasion of Grenada. Following these two events, Congress took action with the Goldwater-Nichols Department of Defense Reorganization Act of 1986 and created requirements for joint education, qualification, and cooperation.

The New Norm

Over the last 13 years, U.S. Servicemembers have come to recognize the capabilities that each Service brings to the battlefield. In Iraq, the tactical implications of joint enablers often were not readily apparent to platoon leaders and company commanders on the ground. This shortcoming was brought home to one unit while conducting operations in a small town southwest of Baghdad in early 2006. As the patrol attempted to negotiate the warren of twists and turns in a village along the Euphrates, it continually made wrong turns. In the Battalion Tactical Operations Center, an Air Force JTAC offered a solution: "I can have the F-16s 'sparkle' the intersections where the unit needs to turn and we can walk the patrol into the target—turn by turn." The ability of the aircraft to illuminate each intersection with an infrared beam visible to the patrol under night vision goggles is an example of the types of capabilities that should be understood at the lowest echelon *before* combat, not learned during it. We now have the opportunity to formalize an educational approach to ensure the next generation learns this lesson in a classroom or an exercise rather than having to relearn it the next time the capability can be brought to bear in combat.

In each Service, the first tour of duty for a company-grade or junior officer is spent learning the foundational skills of his or her trade, whether that of a pilot, platoon commander, ship driver, or signals officer. These formal courses traditionally focus on Service capability

U.S. Army Warrant Officer presents team findings during Warrant Officer Solarium at Command and General Staff College, Fort Leavenworth, Kansas, January 2016 (DOD/David Vergun)

but should also incorporate elements of joint training and education. As the "sparkle" above illustrates, it is less likely that optimum force can be applied to an enemy at a decisive point if leaders in basic maneuver formations do not understand the capabilities of the joint force. The U.S. military's asymmetric advantage in combat stems from the strength of unparalleled experience in joint warfighting. Even at the basic levels, Service schools must train to fundamental joint capabilities to effectively employ the force.

Career-level school for Army captains and Navy lieutenants (O3 level) in each of the Services is another opportunity to instill the efficacy of joint warfighting. The Chairman of the Joint Chiefs of Staff Instruction on Officer Professional Military Education defines this level of schooling as "primary education." While these schools focus on "preparing junior officers to serve in their assigned branch, warfare, or staff specialty," the Chairman's instruction continues: "service schools that have programs centered on pay grade O-3 officers will foster an understanding of joint warfighting necessary for success at this level." Even more specifically, appendix B to enclosure E of the instruction states that the joint emphasis of instruction in branch, warfare, staff specialty schools, and primary professional military education courses must prepare "officers for service in joint task forces (JTFs) where a thorough introduction in joint warfighting is required," to include "the fundamentals of joint warfare, JTF organization and the combatant command structure, the characteristics of a joint campaign, how national and joint systems support tactical-level operations, and the capabilities of the relevant systems of the other services."[3]

A quick survey of the mission statements of the primary education institutions of each of the Services, however, shows a less-than-enthusiastic embrace of the Chairman's guidance. Beginning with the Army, the Captains Career Course states that its mission is to:

[provide] *captains with the tactical, technical and leader knowledge and skills needed to lead company-size units and serve on battalion and brigade staffs. The course emphasizes the development of leader competencies while integrating recent operational experiences of the students with quality institutional training. It facilitates lifelong learning through an emphasis on self-development. The curriculum includes common core subjects, branch-specific tactical and technical instruction, and branch-immaterial staff officer training.*[4]

Note that a focus on education in the synergistic employment of joint capabilities is missing in action in the above definition.

Moving to the Air Force, the Squadron Officer School's stated purpose

Marine assigned to 13th Marine Expeditionary Unit coordinates landing of MV-22 Osprey on San Clemente Island, California, September 2015 (U.S. Marine Corps/Alvin Pujols)

is to "educate, motivate, and mentor captains as current and future Air Force leaders."[5] But as with the Army, there is no mention of *joint* leaders. Furthermore, the school aims to have "officers step out of their specialties and broaden their focus on essential leadership competencies . . . in Officership, Leadership, Problem Solving, Core Values, and the Air Force as an institution in the profession of arms."[6] According to the written goals of the school, "educated students will value their unique role as Air Force officers by applying airpower leadership to effectively execute military missions, and valuing the warrior-leader ethos and its impact on airpower development."[7] Again, as in the case of the Army, there is no reference in the Air Force definition to developing an understanding of joint capabilities.

The Marine Corps and Navy schools have similarly stated Service-exclusive goals: "The Expeditionary Warfare School challenges students to think critically as Marine Air Ground Task Force officers by providing them with a firm doctrinal foundation, augmented with the exchange of practical experiences, and reinforced with extensive practical application and numerous planning exercises."[8] In just one example of Navy primary education, the Surface Warfare Officers School's stated mission is "to provide a continuum of professional education and training in support of Surface Navy requirements that prepares officers and enlisted engineers to serve at sea."[9]

As these examples show, all of the Services' junior officer–level courses have gaps in following the Chairman's guidance and are missing opportunities to create the next generation of warfighters who think jointly. General Anthony Zinni, USMC (Ret.), the former commander of U.S. Central Command and a well-respected authority on joint education, agrees. As he stated in an interview in 2014:

We need to push joint education to lower and lower ranks. In my day, we only got it at the war colleges; now it is at the major's schools. We need to get it to the captain's schools—in Expeditionary Warfare School. Also, we do more of it at "touch point" schools that are only three weeks in length. More joint familiarization is good, and the younger in a career it occurs [the] *better. Joint is how we fight now.*[10]

Vision for Joint Officer Development

The Chairman's *Vision for Joint Officer Development* lays out a structure for a joint learning continuum with four pillars: joint individual training (JIT), joint professional military education (JPME), joint experience, and self-development.[11] The Army has built on this guidance with its Army Leader Development Strategy (ALDS), which frames this process into three domains: institutional (the Service schoolhouses and their professional military education); operational (the experiences gathered while operating as a member of military organizations and units); and self-development.[12] These domains are similar to the Joint Officer Development categories when JIT and JPME are viewed as subsets of the institutional domain. ALDS provides a useful frame-

work to address proposed changes to junior- and company-grade officer professional development.

From an institutional standpoint, the career-level Service schools should continue to teach doctrine and capabilities, but also demonstrate how these elements should nest within and complement joint doctrine and the capabilities of the other Services. There are two other simple and low-cost methods to better incorporate joint capabilities into these schools. The first is to have instructors from each of the schools use vignettes with joint applications as part of their instructional techniques. These examples of joint success and failure are available from many sources, but one of the best is from the consortium of Service doctrine organizations known as the Air Land Sea Application Center.[13] The second recommendation is to expand "cross-pollination" of exchange instructors. While senior- and intermediate-level Service schools have a number of instructors from the other Services, the junior schools have much less—often zero—representation. The Army and Marine Corps do typically exchange a single instructor, but neither Service has Air Force or Navy instructors at the Service career-level schools.

Operationally, we must take advantage of collocated organizations from the different Services. For example, Navy Information Warfare junior officers typically are first assigned to Navy Information Operations Command sites for initial training. Each site is located at an installation with other Services. These sites are populated by junior and senior officers from multiple Services who represent the respective perspectives. With just a little coordination, these venues could have great potential to serve as prime opportunities to cultivate and implement joint policies and joint acclimatization. Similar opportunities exist throughout the military enterprise. Identifying and leveraging these "joint village" assignments could serve as the first step in the establishment of a roadmap for junior officers to be exposed to and complete joint education at an earlier stage in their careers. Additionally, more effort and focus must be placed on ensuring that joint operational exercises are the norm rather than the exception. The increased capability of live, virtual, and constructive exercise frameworks can provide excellent joint training in all warfighting domains for junior- and company-grade officers.

From a self-development perspective, the Chairman's own reading list should focus specifically on joint education and warfighting and should be updated each year to reflect the growing quantity of literature on recent conflicts. The most current version of the list, released in 2012, outlines 18 books that, according to the Chairman's preface, capture "the values and ethos of our military profession; promote innovative thinking to prepare for the operational realities of an uncertain future; and provide insights into the foundations of our Service cultures."[14] Since the individual Services each have extensive reading lists that also address these topics, the Chairman's list might better focus on Service cultures and capabilities for the joint fight, especially regarding a targeted list for junior- and company-grade officers. Moreover, virtual and collaborative educational tools could be used to amplify joint discussions of the lessons learned from the books. These virtual meetings, while never a substitute for face-to-face interaction, would add a greater depth of understanding and a higher degree of value to these self-study programs.

While drawing down combat operations comes with institutional and organizational challenges, it also provides opportunities. Today's opportunity is finding ways to capitalize on the joint experience of the current force and strengthening joint development in our junior- and company-grade officer ranks. Such an investment would provide the strength that will contribute to success on future battlefields. Through full and enthusiastic adherence to the Chairman's guidance on primary education and a deliberate approach to sustaining this new norm of jointness, we can accelerate the joint experience endowment and increase the combat effectiveness of the joint force. We cannot afford to do less. **JFQ**

Notes

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[8] Marine Corps University, "Expeditionary Warfare School," available at <www.mcu.usmc.mil/ews/SitePages/Home.aspx>.

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[12] *Army Leader Development Strategy 2013* (Washington, DC: Headquarters Department of the Army, June 2013), available at <http://usacac.army.mil/sites/default/files/documents/cal/ALDS5June%202013Record.pdf>.

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[14] Martin E. Dempsey, "Chairman's Reading List, 2012," available at <www.jcs.mil/Portals/36/Documents/Publications/CJCS-ReadingList2012.pdf>.

Pilots from 80th Flying Training Wing's Euro-NATO Joint Jet Pilot training program prepare to take off at Sheppard Air Force Base, Texas, October 2014 (U.S. Air Force/Danny Webb)

The Future of Senior Service College Education

Heed the Clarion Call

By Charles D. Allen and Edward J. Filiberti

In 2014, *Joint Force Quarterly* (*JFQ*) helped stimulate professional dialogue on joint professional military education (JPME) by establishing a new section titled "JPME Today." This article continues the discourse on JPME policy issues. Although initially directed by the Goldwater-Nichols Department of Defense Reorganization Act of 1986, jointness has grown to become an integral part of our military culture. Applying the U.S. Army leader development framework, the three pillars of joint training, joint work experiences, and JPME all served to reinforce competencies and helped acculturate jointness within a heretofore Service-centric military.

The current strategic environment has aided this transition. Unified operations during the war on terror have been

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inherently joint with officers gaining invaluable *experience* with assignments in joint, interagency, and headquarters and organizations. Focused joint *training* programs also helped prepare leaders and developed their competency in tactical and functional tasks. Notwithstanding, as historian Richard Kohn notes, "The practice of the profession is almost wholly new to an officer at each successive level of responsibility."[1] So while joint tactical wartime experiences can serve as a springboard for continued development, at the most senior levels—operational and strategic—attaining these new competencies for our maturing warfighters will continue to depend on *education*.

Importantly, senior level colleges (SLC) provide the key educational venue for this development of critical competencies required at higher levels. While senior fellowships are an important part of broadening the perspectives of senior officers, for most officers, the required foundational knowledge is gained through attendance at resident and distance education programs of the senior Service colleges. As the U.S. military restructures to meet Title 10 manning, training, and equipping demands as well as to provide warfighting capabilities to the joint force, tensions reemerge about where to invest resources, especially during times of fiscal austerity. The purpose of this article is to examine the changed context for leader development and propose several initiatives to posture the U.S. military for future expansion and success in the post-drawdown strategic environment. The most important proposal is to maintain current student throughput—and the associated faculty resources—at the senior level. This article primarily focuses on Army senior officer education, but the arguments could be generalized to the joint force.

The Challenge to PME

While providing an important experience base for joint officer development, the war on terror and associated operational demands emphasized in-theater warfighting service and indirectly diminished the perceived value of school attendance. The emphasis on overseas deployments resulted in routine deferrals from required professional military education (PME).[2] This led to a backlog of SLC deferrals where a good portion of those affected students would still greatly benefit from SLC education. The withdrawal from Iraq and Afghanistan and corresponding drawdown of forces, however, may lead to some misguided policy decisions that fail to capitalize on current SLC throughput to address the backlog as well as expand the base of educated senior officers to meet future military expansion requirements.

Historically, as the military draws down, there has been an institutional compulsion to proportionally reduce attendance at senior PME programs. With the current competition for fiscal resources, the tendency is to equivalently reduce or "salami slice" all institutions and activities. For example, a 20 percent cut in end-strength could be applied across the board to institutional and functional organizations. That would translate to a 20 percent cut in staffing of PME schools and, consequentially by design, a 20 percent reduction in the number of officers educated within those programs. An unstated objective may be to return to pre–war on terror levels for student populations.

In fact, the current drawdown has already driven proportional reductions in manning and resourcing at PME institutions. The Army reduced faculty positions for intermediate level education at the Command and General Staff College and Army War College. Commensurate with the 29 percent budget cuts over recent years at National Defense University (NDU) (which includes the National War College and the Dwight D. Eisenhower School for National Security and Resource Strategy) is the reduction of student selections and throughput.[3] For academic year 2015, National War College student enrollment dropped from 224 to 208—just over 9 percent.

In response to both critics and champions of PME, NDU unveiled "Break Out" as its campaign strategy for the education of senior leaders at the same time as the Army War College leaders published their academic campaign plan in *JFQ*.[4] Both sought to reinforce the relevancy of their institutions to national defense. Reforms at the Army War College also focused on faculty credentialing along with the development and delivery of a curriculum that addressed concerns about the rigor of senior PME. Although these are important measures to improve the educational programs of the SLC, none of these efforts addresses the important opportunity of increasing the proportion of SLC graduates within the post-drawdown senior officer population by maintaining current throughput.

A key question to address for this drawdown remains: Is a reduction in the number of educated senior officers and civilians that is proportionate with force cutbacks prudent for the joint force? This is an important question to address given the frequently stated imperative to invest in leader development and education during periods of military drawdown. Historical examples often cite the interwar period between World War I and II, the resumption of senior military officer education with the start of the Korean War, and the re-professionalization of the force following the Vietnam War.

Realities of the Strategic Environment

The contemporary operational and strategic environments are no less unstable or uncertain than those historical examples and are likely to pose similar or arguably even greater leader education challenges for the joint force. As the Service with the largest manpower authorizations (nearly 1.5 million strong when counting Active, Reserve, and civilian components), developing adequate numbers of Army senior leaders while drawing down may be the sine qua non for responding to future expansion requirements. With fewer senior officers on hand, those we retain must be the best that we can make them.

While the 2012 Defense Strategic Guidance (DSG) directed a rebalance to the Asia-Pacific region, the strategic environment continues to reveal challenges elsewhere. As Yogi Berra once stated,

"The future ain't what it used to be." A corollary might be that with the increasingly volatile environment, "It never will be." Just in the past year, emerging crises in Ukraine with Russia and the Middle East and the Levant as well as the Ebola emergency response in West Africa demonstrated that the Army is expected and required to respond with its existing forces across a wide range of mission sets. Such operations call for adaptive, strategic leaders who have talented and expert senior officers in command and on their staffs. Importantly, the DSG recognizes "our inability to predict the future" and directs that the Department of Defense (DOD) "will manage the force in ways that protect its ability to regenerate capabilities that might be needed to meet future, unforeseen demands, *maintaining intellectual capital and rank structure that could be called upon to expand key elements of the force*" (emphasis added).[5]

Provide Capability and Capacity

Despite the pressures to reduce defense spending, the U.S. military will still be called on to employ its available *capabilities* based upon the operational and strategic demands of an increasingly unstable global environment. Given persistent conflict and reduced force structure because of political and fiscal realities, the joint force will require the repetitive assignment and rotation of its field-grade and most senior military officers into key strategic level headquarters and organizations. Thus, the joint force will need talented and educated leaders and managers from the Services to provide the *capacity* to fulfill rotational assignments that persistent conflict demands. Mission success will be dependent on expert knowledge, judgment, and strategic leadership competencies of experienced and appropriately educated leaders. Accordingly, mid- and senior-grade officers will assume a host of new key and essential positions as additional joint headquarters and staffs are established or augmented to deal with a wide range of *emerging* operational demands.

Accordingly, the years of persistent conflict have also institutionalized a range of policies that assure nearly every available officer will be rotated into key and essential positions. For instance, Congress established laws and DOD promulgated policies placing limits on deployment-to-dwell ratios for both units and *individuals*.[6] These measures require the tracking and reporting of deployments and set thresholds that require the Service secretaries' or the Secretary of the Defense's approval to exceed. This will limit the repeated use of selectively educated senior officers.

The Army's present challenge is to meet drawdown requirements for an end-strength of 450,000 Soldiers by fiscal year 2018. With the all-too-real prospects of a second sequestration, this drawdown may be continued to reach 420,000 under the provisions of the Budget Control Act of 2011.[7] The nightmare scenario for the Army includes the prospect of reducing Active Component (AC) end-strength to 380,000 or lower depending upon competing budget pressures driven by the U.S. economic and political climates.

Senior Education Requirements

In an Army based on detailed force planning and documented requirements, it seems implausible that the Service does not have explicit requirements for senior officer education or a plan to distribute the valuable JMPE graduates and their intellectual capital to key and essential positions within the force. It does have a policy for officer development that addresses senior Service college education for command and staff positions requiring "a thorough knowledge of strategy and the art and science of developing and using instruments of national power . . . during peace and war. This knowledge is necessary in order to perform Army, Joint, or Defense Agency operations at the strategic level."[8] Within DOD, this is Military Education Level 1 (MEL 1) for selected successful lieutenant colonels and colonels at the respective grades of O5 and O6. Civilians in the GS-14 and GS-15 grades are also offered MEL 1 opportunities.

One method of identifying SLC attendance requirements is to identify specific positions on manning authorization documents that require MEL 1 to support successful individual leader and organizational performance. Given a specific number of positions, the Army personnel management system could then select the requisite number of officers (by grade and specialty) to attend SLC venues and then distribute those officers to the force to fill those billets. This method would seem to be the preferred way for the Army to do business, identifying requirements and then filling them. It has been discussed often but never implemented due to the constraints it would place on the personnel management system.

While designating certain billets as MEL 1 may be reassuring to the Army bureaucracy, it ignores or at least downplays the broader purpose: The development of the requisite Army leaders and institutionalizing the flexibility demanded by emerging requirements and the likely expansion of the force. We cannot afford a management approach that breaks down when faced with real-world requirements and inevitable crises. The Army Leader Development Strategy (ALDS) sets the goal of providing "the right officer with the right education at the right time."[9] We believe the goal should be more explicit for senior leaders—*to develop the greatest number of high potential officers in order to provide the Army with the pool of talented, educated officers to act as strategic leaders and senior advisors through MEL 1/SLC experience.* These officers have a greater likelihood of being promoted and selected for service at the O6 grade and beyond. Realistically, they will likely have multiple assignments during the remainder of their careers, with one or more postings requiring SLC education.

There are impediments, however. In large measure, the Army is dealing with an artifact of the war on terror, which placed a premium on service in key positions within the deployed operational force over JPME attendance. This led to a culture of deferral for PME where being selected was more important than attending SLC. Members of the profession of arms in the AC and Active Competitive

Members of 366th Fighter Wing train alongside Army and Marine Corps affiliates during capstone training event, November 2014 (U.S. Air Force/Roy Lynch)

Categories (ACC) watched and learned that it was possible to succeed without PME attendance. Concomitantly, the Army culture shifted over the past decade of war to one that generally dismissed education in the face of demands for training and operational experience. The opportunity now exists to reset such "beliefs and expected behaviors" with the AC and ACC officers.

The key to attaining the ALDS goal is to embed PME attendance into the culture of the Army where being MEL 1 credentialed is what successful professionals strive to achieve and how they obtain those key billets. This is now the case within the Reserve Component (as evidenced by sustained demand for Distance Education Program attendance) and within some Special Branches (with requests for increased number of MEL 1 slots).

The greatest redress to this war on terror cultural artifact has been Army Chief of Staff guidance that requires MEL 1 completion prior to assuming command or assignment to key billets as well as additional scrutiny of deferments by elevating the approval authority. In November 2014, Air Force Chief of Staff General Mark Welsh also directed a rebalancing of PME within his Service: "to be promoted to colonel, lieutenant colonels must have finished senior developmental education at Air War College, or an equivalent [MEL 1] program."[10]

While the number of operational deferments has been greatly reduced, the Army still needs a few years to recover from the shift in priorities that reduced educational attendance for more than a decade during the Operation *Enduring Freedom* and Operation *Iraqi Freedom* conflicts—hence the need for a second "clarion call."[11]

The Army Case

For the 2014 academic year, 946 seats were available for Army officers in the Active and Reserve components. Of these, 527 seats were in the Resident Education Program and the Army War College Fellowship Program; 419 seats were in the Distance Education Program. ACC officers occupied 390 of the 527 seats in the resident and 61 seats in the fellowship programs, as well as 60 of the 419 seats in the distance program. Under current Army processes, the number of officers selected for senior-level education depends largely on the capacity at the various colleges and in the fellowship program—not on validated educational requirements for specific billets in the operating and generating forces.

Previous studies by the Department of the Army examined O5 and O6 positions and determined that approximately 75 percent of O6 positions required MEL 1. A 2012 Army-funded RAND study was unsuccessful in explicitly identifying MEL 1 requirements across Army organizations.[12] Although the Army seeks and values MEL 1 graduates, RAND found no consistent rationale to validate MEL 1 assignment requirements. The RAND study confirmed the conclusion of prior studies that attendance is dictated principally from the capacity of MEL 1 institutions. Even

Students from National Defense University listen to brief in combat direction center aboard USS *Shiloh* in Yokosuka, Japan, October 2014 (U.S. Navy/Liam Kennedy)

during the "Grow the Army" initiative to support the surge of units for *Enduring Freedom* and *Iraqi Freedom*, the number of seats for uniformed officers remained steady. Paradoxically, during those years the Army War College was permitted to expand its capacity by adding four seminars to accommodate an increase in International Fellows (IFs) (from 40 to 80) attending the Resident Education Program. The other attendance numbers stayed fairly constant with some wide swings in Reserve Component attendance based upon approved AC deferrals.

For fiscal years 2012–2015, approximately 74 percent of Active and Reserve component O6 officers have completed or will complete MEL 1. Of particular interest, 77 percent of currently serving ACC O6s are MEL 1 qualified or are attending a MEL 1–producing venue. These percentages approximate the proportion of billets (75 percent) previously found to require MEL 1 education. What the 74 percent of the total O6 population qualified as MEL 1 compared to the approximate 75 percent of positions requiring that level of education does not account for is that MEL 1 graduates will generally serve in two to three different senior leader positions before retiring. This makes management of MEL 1 officers problematic, especially given that those MEL 1 positions are currently not coded, and it also leaves the "bench" empty for when the MEL 1 positions are invariably expanded during periods of war.

The projected reduction of Army force structure decreases the AC from 569,000 to 490,000 for fiscal year 2016 with much smaller reductions in the Reserve (1,000) and National Guard (8,000). The Department of the Army G1 projects that the operating strength of ACC O6s will be reduced by 11.2 percent and ACC O5s by 14.2 percent—a combined reduction of 12.5 percent by 2018. A salami-slice reduction in Army War College capacity proportional to the end-strength reduction would reduce ACC students by 12.5 percent (167 to 146 officers). To meet JPME seminar composition requirements, there would be a corresponding reduction in the number of IF, civilian, and other Service attendees for the Resident Education Program.

A Strategic Choice

A stated goal of the Army Chief of Staff is to increase the quality of the officer corps to meet the demands of an increasingly complex strategic and operational environment and to enable the rapid expansion of the Army. The scope of this increased demand can be extensive. For instance, during the start of the war on terror, the number of Army O5 and O6 positions to support DOD, North Atlantic Treaty Organization, joint, and special operations force activities grew by over 500. This demand equates to around 5.5 percent of the projected total O6/O5 AC population in fiscal year 2018 and almost 4 percent across all (Active and Reserve) component O6/O5 populations.

Maintaining the current throughput of Army officers across all SLC venues would increase the percentage of O6 MEL 1–qualified officers from approximately 74 to around 78. Importantly, the proportion of MEL 1 ACC O6s would increase from about 77 percent to 89 percent, significantly adding to the quality of the bench of the smaller pool of officers. We have also seen the number of deferments decline due to the reduction in operations tempo and policy decisions by Army senior leaders. Consequently, SLC attendance should occur earlier in an officer's career—immediately following successful O5-level command or equivalent. Combined with sustained throughput, this would increase the proportion of Army O6 MEL 1 ACC graduates in the force to 90 percent or more. Importantly, this would increase the proportion of Army MEL 1 graduates across the Active and Reserve components to more than 80 percent of serving O6s.

Implications

In 2004, Defense Secretary Donald Rumsfeld notoriously remarked that "you go to war with the Army you have, not the Army you might want or wish to have."[13] While he was severely criticized for what was interpreted as a flippant response to a Soldier's issue with Humvee armor protection, it brings to light a force management truism. The military must respond to crises with what we have and, at the senior level, with those whom we have. For most projected contingencies, there will likely be limited time to train, educate, and gain the senior leader experience necessary to fill key positions compe-

tently. Senior leaders are not grown or educated overnight. And at the strategic level, pedestrian performances can have profound negative consequences. To expand positions at these high levels, we must rely on the bench, and the bench must be as talented as possible. There is a range of relatively low-cost initiatives that can help build the bench.

Reestablishing an appropriate balance of education with operational experience and training, especially for senior officers, requires demonstration of its value to the profession of arms. First, selection and attendance at SLC must be the norm for high-potential lieutenant colonels. Second, the officer leader development policy has to establish time in officer career paths to include SLC attendance. Third, completion of SLC programs must be viewed as institutional/professional certification for command and key billet assignments. Finally, while education may enable the individual's contribution to organizational missions, duty performance is the benchmark for future advancement of senior military officers. Experience and education constitute two sides of the same coin and should be used to posture senior officers and their organizations for future success.

Maintaining current Army throughput would require support from other activities to sustain the quotas for IF, civilian, and other Service attendees at the various SLC venues and continue to build joint, interagency, and international relationships as well as partner capacity. Additionally, maintaining throughput might increase the number of senior officers not available to the force. However, for fiscal years 2014 through 2017, the current grade plate adjustments and Army G1 operating strength projections accommodate the increased number of transient, holdee, and student positions.

Maintaining the throughput for the Army War College Resident Education Program would require fully resourcing the requisite faculty positions (Title 10, military, or contract faculty) throughout the planned drawdown. A good news story is that 60 percent of the Army War College Title 10 positions lost during the sequestration budget cuts have been recently reinstated. This represents an important institutional commitment to resourcing senior leader education. However, in the current era of competition for diminishing resources—in this case enabled by funding—future calls for "fair-share cuts" could inevitably result in another round of salami-slice reductions across the force. We should be reminded that essential elements of strategic leadership are enabling the future success of an organization and setting priorities to do so. Continuing to prioritize SLC at the current throughput of around 950 senior Army officers accomplishes both of those strategic imperatives. This will achieve an overall goal of 80 percent MEL 1–qualified colonels from all components and a specified goal of 90 percent for ACC colonels.

Since JPME policies dictate an interconnectivity across all SLC venues to meet minimum Service and interagency mix requirements, we believe a second clarion call must be sounded for all Services to avoid misguided adherence to proportional cuts in SLC throughput capacity. The Nation and its Servicemembers deserve the best joint-capable senior leaders that the Services can produce. Perhaps most importantly, this will give the Army the ability to respond to any future crisis with talented, experienced, educated senior leaders at a moment's notice, ready to provide the right officer with the right education at the right time to meet a wide range of potential operational demands. **JFQ**

Notes

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Newly commissioned Navy ensigns and Marine Corps 2nd lieutenants from 2011 U.S. Naval Academy class celebrate graduation with traditional hat toss at Navy–Marine Corps Memorial Stadium (U.S. Navy/Kevin S. O'Brien)

Officers Are Less Intelligent

What Does It Mean?

By Matthew F. Cancian

An online degree from the South Harmon Institute of Technology in Interdisciplinary Studies doesn't make you smart.

—A Sarcastic Captain

The American military is not getting the leaders it needs for the complexities of 21st-century warfare. This refrain has been a centerpiece of the "Force for the Future" initiative, and now there is some hard evidence to support it. According to data obtained from a Freedom of Information Act request, the intelligence of new Marine Corps officers has declined steadily since 1980. Two-thirds of the new officers commissioned in 2014 would be in the bottom one-third of the class of 1980; 41 percent of new officers in 2014 would not have qualified to be officers by the

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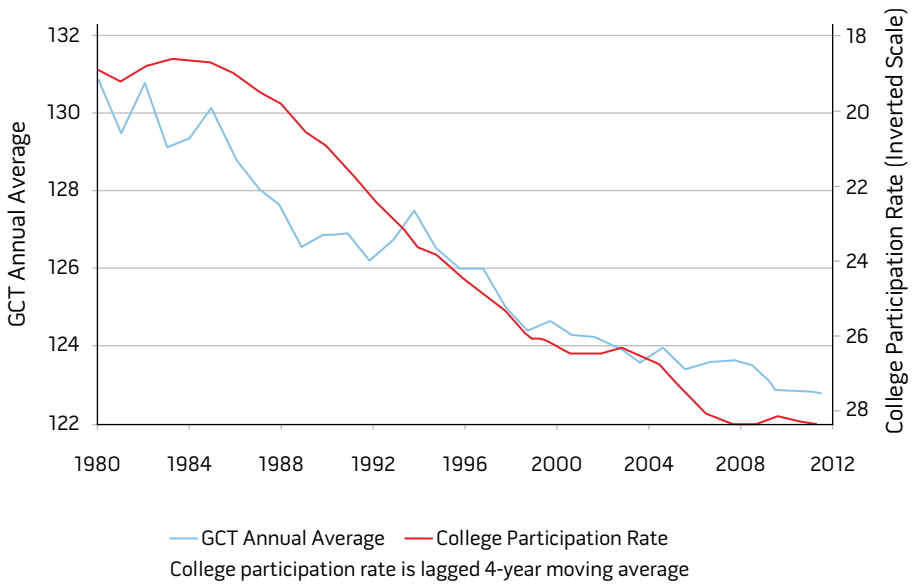
standards held at the time of World War II. Similarly, at the top of the distribution, there are fewer of the very intelligent officers who will eventually become senior leaders.

This trend has not been caused by Marine Corps policies; it is a reflection of the expansion of higher education in America. In 1980, 18.6 percent of 18- to 24-year-olds were in college. Today, that number is close to 30 percent. The dramatic rise in college attendance has increased the pool of people eligible to become officers in the military (possession of a bachelor's degree being one of the chief requirements to be commissioned as an officer in all branches), but it also means that possession of a college degree is a less significant indicator of intelligence now than it once was.[1] Marine Corps officers have reflected this trend, declining in average intelligence along with the population of college graduates (see figure 1).

A similar decline in intelligence has likely occurred in the other Services' officer corps, as this is a trend in the pool of all college graduates and not something specific to the Marine Corps. For example, the average Scholastic Aptitude Test (SAT) score of a Navy Reserve Officer Training Corps graduate in 2014 was the same as that of a new Marine officer.[2] In the Army, the test scores of previously enlisted officer candidates have been declining since at least the mid-1990s (although the Army attributes this decline to changes in accession sources, unlike this article, which views the issue as more broadly based).[3] This article focuses on the Marine Corps because it has administered the same test, the General Classification Test (GCT), for decades and because of its responsiveness to the Freedom of Information Act process.[4] More study is needed to ascertain the degree to which this phenomenon presents across the Department of Defense. A good first step would be to administer the Armed Services Vocational Aptitude Battery (ASVAB) to all officer candidates in all Services, study what makes an effective officer, and implement long-term reforms to strengthen the officer corps of the 21st century.

Figure 1. General Classification Test and College Participation

College Participation Rate Axis Is Inverted Scale



College participation rate is lagged 4-year moving average

How Higher Education Has Changed

The percentage of young Americans in college was relatively steady during the 1960s and 1970s, but this started to change in the early 1980s. Over the next three decades, the percentage of young Americans in college increased by over 50 percent—not just the number of Americans, but their share of the population. Contrary to the assumptions of many, students in 1980 were not accepted into college just because they came from a privileged background, but rather because of their intelligence; in fact, over 80 percent of Americans in the top quartile of intelligence went to college.[5] Before World War II, college attendance was based almost entirely on social status, but it had shifted toward merit with the introduction of the GI Bill and other factors. There were some people in 1980 who were intelligent but could not afford to go to college, and there still are in 2016. But overall, the expansion in college attendance since 1980 has been from students who are less intelligent on average than college students in 1980. This means that young people who possess a college degree in 2016 are, on average, less intelligent than those who possessed a college degree in 1980. The private sector and civilian agencies of government have responded by demanding a postgraduate education for more jobs, but a comparable shift has not been made in the military. The result of this effect is that the pool of potential officer candidates has become less intelligent.

Why It Matters

The link between intelligence and performance in the enlisted ranks has been well studied and found to be quite significant. In World War II, individuals who tested in the lowest mental categories (IV and V) had to be sent to special training units before they could go to boot camp. Now, by law, no more than 20 percent of any given year's enlistees may be Mental Category IV (the second lowest category), and they must possess a high school diploma. No Category Vs are allowed to enlist.[6] The aggressive recruiting of intelligent enlistees makes sense given the link between intelligence and enlisted job performance; studies show that more intelligent enlistees are more proficient at technical skills, make more lethal riflemen, and are more law abiding.[7] The most holistic studies are found in the congressionally mandated Job Performance Measurement project, a series

Marine supervises The Basic School permanent personnel battalion during 10-mile hike aboard west side of Marine Corps Base Quantico, Virginia, June 2013 (U.S. Marine Corps/Cuong Le)

of broad, multimillion-dollar studies assessing how accurately intelligence tests could predict on-the-job success for enlisted members in the military.[8] The Army's "Project A" was conducted in the 1980s as an extension of this effort.[9] The results are unambiguous: intelligence testing provides an excellent way to predict the job performance of enlistees. But what about officers?

The link between intelligence and performance in officers, while less thoroughly studied than the link in enlisted, is still clear. In World War II, there was no requirement that an officer have a college education, but possessing a 4-year degree allowed one to be commissioned without taking the GCT. Without a college degree, enlistees in the Army who scored above 110 on the GCT were considered for Officer Candidate School (OCS),[10] which was used to train and screen potential officers (the minimum score for Marine officer candidates was 120).[11] The GCT score was found to be highly correlated with success there. In fact, it was so important that it was administered to all officers again at the beginning of infantry school to ensure that they were competent enough to be suitable combat leaders. Additionally, there was much debate about whether 110 was a sufficient minimum score, as most of the failures at Army OCS were by candidates who scored between 110 and 115.

Scores on the GCT have been found to be highly indicative of performance at The Basic School (TBS), the 6-month-long initial training for Marine officers. New officers at TBS are graded on a mix of military skills (such as running an obstacle course or orienteering), leadership evaluations (made by staff members and peers), and academics (technical knowledge). The GCT score was found to have a 0.75 correlation with academic grade at TBS and a 0.65 correlation with total grade there.[12] This means that GCT scores have a 0.6 correlation with nonacademic events. It is likely, therefore, that not only does the GCT correlate strongly with academic ability, but that it also correlates to leadership grade at TBS. No pen and paper test can exactly predict leadership; these results, however, indicate that there is a relationship between GCT scores and the leadership potential of young officers.

It is impossible to link particular episodes in recent history to a decline in intelligence in the officer corps. However, one can point to incidents and note that they are what one would expect to see and that will be seen more often if current trends continue. For example, in May 2010, 13 junior Marine Corps officers were administratively discharged because they had cheated on a land navigation course at TBS. According to

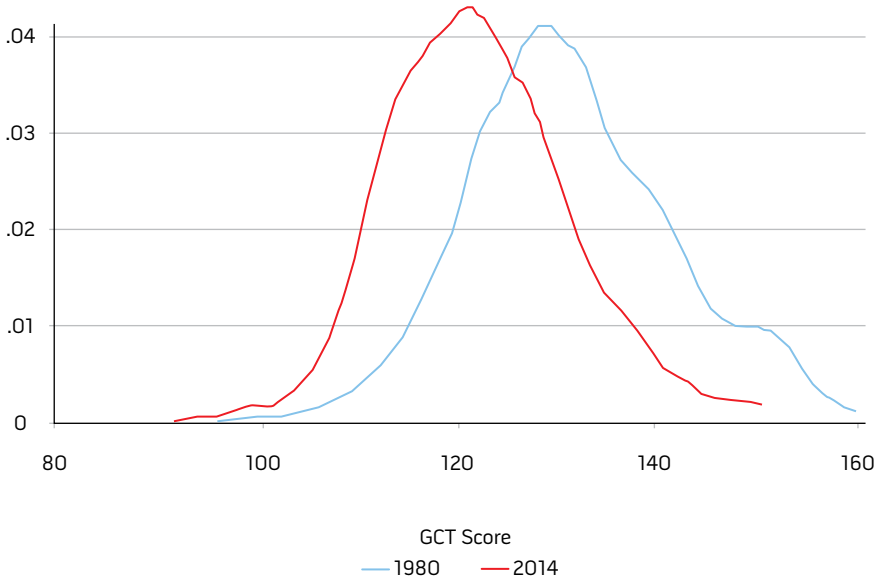
the *Marine Corps Times*, "At least one of the lieutenants investigated told officials he didn't understand the need to learn land navigation skills when technology, such as GPS [global positioning system], could do the work for them."[13] This incident is indicative of what we could expect from an officer corps of declining intelligence: officers who cannot meet the standards and who rely on technology to compensate. In a different Service, we might point to the 79 Air Force nuclear weapons officers at one base who faced disciplinary action for cheating on an exam.

In the field, the decline in intelligence might manifest itself in a focus on adherence to process output instead of achieving a desired outcome. Less intelligent officers need metrics that focus on how well they execute a process (output), rather than whether they accomplished the commander's mission (outcome). In Afghanistan, many of the metrics focused on output instead of outcome: "*shura*s held versus local goodwill, number of partnered operations rather than real relationships built outside the wire, dollars spent versus actual popular commitment, IEDs [improvised explosive devices] found versus demonstrated local security forces readiness."[14] The result was a campaign that was less effective than it might have been.

The decline in average intelligence manifests itself not just in the middle of the distribution, but also at the top. Figure 2 shows the distribution of intelligence scores for 1980 and 2014. Note how not only the average has declined, but also the number of officers who are achieving the highest scores.

There has been a lot of writing about how to promote "strategic" or "critical" thinking in the military.[15] The story told by GCT scores is especially worrisome in this regard. In 1980, there were 14 Marine officers entering who scored above 155 (on a test with a maximum score of 160). In 2004, the year of incoming officers who are now recently promoted majors, there were only two lieutenants who scored above 155. In 2014, there were none. The Acting Principal Deputy Under Secretary of Defense for Personnel and Readiness, Brad Carson, in presenting his "Force of the Future" initiative, asked, "Are we choosing from too narrow a pool our next Navy Admiral James Stavridis, Air Force General Norton Schwartz, or Army Lieutenant General H.R. McMaster?" The evidence suggests yes.

Figure 2. GCT Score Kernel Distributions, 1980 and 2014



A Modest Proposal

Some might argue that junior officers only need leadership and physical fitness. If so, we already have a cadre who fit that bill: our staff noncommissioned officers (SNCOs). Why not have them lead our platoons, companies, and battalions? While many might dismiss this idea outright, in the long view of history, it has been done before by successful armies. Take the Roman Legions, for instance, whose centurions rose through the ranks to lead all units up to the cohorts (battalion equivalents). Thus, centurions, proven enlisted leaders, held responsibility equivalent to that of a lieutenant colonel. A small group of educated aristocrats was needed only for the highest ranks.[16] That functioned very well—2,000 years ago. While the nature of warfare has not changed, its practice certainly has.

The complex nature of contemporary warfare puts great intellectual demands on our mid- and upper-level leaders. The Roman Legions did not employ artillery, tanks, communications, or any number of technical branches that we have today. Consider the job of the contemporary infantry platoon commander, the least technical, most leadership-intensive position. In a conventional war, he must be a physically fit leader, but he must also know how to program a radio, accurately locate targets for airstrikes and artillery, and calculate geometries of fire, among many other intellectual demands. In an unconventional conflict, we also ask him to be a cultural expert, government builder, and humanitarian aid planner. This requires a high degree of intelligence. While contemporary enlistees are on average the brightest they have ever been, there is a wide variance in their quality that makes the "Roman solution" ill advised today.

Physical fitness does not have the correlation to military performance that general intelligence does. In an initial statement to the *Marine Corps Times* regarding this new data, Marine Corps Recruiting Command repeated a common rebuttal to these findings: new Marine officers are the most physically fit that they have ever been, achieving an average physical fitness test score of 279.[17] Our military leaders, however, need to

be more than just tough. While physical fitness is probably well correlated to success in some military skills events, such as the endurance course, it does not have the strong correlation to total TBS grade that intelligence does (0.65). There are numerous studies correlating intelligence to success in the military; there are none doing the same for physical fitness.

Finally, most members of the military would argue that having distance between commissioned officers and the enlisted is necessary for military effectiveness; the decline of officer intelligence and the rise in enlisted intelligence has blurred these lines. Given that the intelligence of entering enlisted has risen over time, and that more intelligent enlisted tend to be promoted, it is not unreasonable to guess that right now the average intelligence of SNCOs is close to that of our junior officers.[18] If officers are much like the troops they command, why have an officer corps at all? Raising average officer intelligence is necessary to maintain the utility and credibility of the officer corps.

Possible Objections to the GCT

One objection to using the GCT to track intelligence is that the test is 75 years old and therefore contains a "cultural distance" that makes it invalid today. In this view, the vocabulary and phrasing of the questions would be clearer to someone from 1941 than to someone from 2015; the test-taker from 2015, therefore, might score lower than someone of the same intelligence from 1941. This is similar to the argument that the SAT is biased against non-whites because it contains cultural references that only white test-takers would understand.[19] The dynamics of the decline in the GCT score, however, disprove the applicability of this theory. In 1980, the average GCT score of Marine officers was 131, slightly higher than the average GCT score for college students during World War II.[20] The score began slowly and steadily declining in the early 1980s. For the cultural distance theory to be true, there has to have been no cultural distance between 1941 and 1983, at which point American culture began slowly and steadily drifting in a way that made questions from 1941 less clear to test-takers. As this does not make much sense, we can reject this theory.

Another objection is that poor record-keeping for GCT scores invalidates any conclusions drawn from test scores. It is true that the number of scores in the data set represents about 85 percent of all the officers who joined the Marine Corps during this time period. Having 85 percent of the scores, however, still enables us to be extremely certain of the result; we can be 99 percent confident that the difference between the mean score in 2010 and 1980 is between 7.58 and 8.42 points. Either way, the decline is substantial. The only other way that missing records could affect the data is if high test scores were systematically removed starting in 1983 and removed in increasing numbers every year for the last 35 years. This is unlikely.

A final question is whether the GCT results are still valid given that the GCT no longer serves any administrative purpose. While the GCT was used in World War II to screen enlistees and officer candidates, after the war it shifted to influence only the Military Occupational Specialty (MOS) assignment of officers. At some unknown point, this function too was lost. Today, the GCT is only administered to "indicate the general health of the officer corps."[21] Change in motivations, however, cannot explain the smooth downward trend that we see. If the change in the use of the GCT in determining MOS was made before 1980, the data would not be affected. If its use was changed during the time period studied and that change had a large impact, we would expect to see a large drop in scores during the year that the use of the GCT was changed. For motivation to have caused this trend, lieutenants at TBS would have to have become 0.5 percent less motivated about this test every year for the last 35 years. This defies belief. Anecdotally, I can also state that young lieutenants at TBS still took the GCT seriously in 2009. It is hard to find a group of young men and women as earnest and eager to excel as young Marine lieutenants.

Why Are the SAT and GPA Insufficient?

In selecting candidates for OCS, the Services have relied on possession of a college degree, grade point average (GPA), and SAT score to judge the candidates' intellectual abilities.[22] As discussed earlier, the primary qualification for officership, possession of a college degree, is not as discriminating as it used to be. SAT scores and GPAs are also unsatisfactory. The problems of relying on GPA, a rather slippery metric, were noted by John Jordan in an article in the *Marine Corps Gazette*.[23] GPA varies greatly by school, and grading standards have eased over time with rampant grade inflation.[24] A GPA of 4.0 from a community college might not indicate that one candidate is more intelligent than another with a GPA of 3.0 from an Ivy League school. The Services have tried to compensate for this effect, but with mixed success.

There is good reason to doubt the year-to-year comparability of the SAT: it seems incredible to claim that, since 1990, the number of Americans in college increased by over 50 percent, and the number taking the SAT has increased by 66 percent, but there has been no change in average SAT score.[25] America's inability to detect the decline in intelligence of college graduates is similar to why the Flynn effect, the rise in intelligence in the Western world over the 20th century, was not noticed until the 1980s when James Flynn compared the scores of unnormalized IQ tests between years (just like the study of GCT score does). In fact, some of the strongest evidence for the Flynn effect comes from the results of military intelligence tests; using the GCT to inform our understanding of civilian trends, therefore, is very much in keeping with psychometric literature.[26]

The SAT can, however, tell us how incoming military officers compare to the average college-bound high school student in any given year. In 2014, the average SAT score of incoming Marine officers was 1198, compared to an average of 1010 for college-bound high school seniors.[27] The average SAT score of incoming Marine officers was not

Drill instructor with New Jersey Army National Guard corrects Albanian officer candidate during 12-week Officer Candidate School program modeled after Active-duty program at Fort Benning, Georgia (DOD/Mark C. Olsen)

maintained by Marine Corps Recruiting Command before 2005,[28] but the Center for Naval Analyses reported the average SAT score of incoming Marine officers in 1983 to be similarly higher than their nonmilitary peers.[29] Marine Corps officers therefore continue to be more intelligent than the average college student. The average college student today, however, is much less intelligent than they used to be because there are so many more of them. Insofar as we believe that the military should reflect society in general, the officer corps continues to accomplish that goal. But in absolute terms, our officer corps today is less intelligent than it was 35 years ago.

Consider if the military's physical fitness testing did not give out absolute scores (which the current Physical Fitness Test and GCT do) but rather just reported how the Servicemember stacked up against the average American (like the SAT). Say that in 1980, the average Servicemember was in the 80th percentile of physical fitness of all Americans (to use an arbitrary number). In 2014, the average Servicemember was still in the 80th percentile of all Americans, but the average physical fitness of Americans had declined dramatically because of obesity. Being in the 80th percentile is now not as rigorous as it was in 1980. The average Servicemember from 1980 would run faster and be stronger than the average Servicemember of today, despite them both being in the 80th percentile of their peers. This absolute, not relative, decline is true for intelligence, too.

What Is to Be Done?

How should we react to the results of the General Classification Test?

Administer the ASVAB to Every Officer Candidate. Officer candidates are almost all screened at a Military Entrance Processing Station prior to joining the force. There, the ASVAB is administered to potential enlistees. It should also be administered to all officer candidates; this solution is a low-cost and simple way to measure the intelligence of all officer candidates on a scale that can be controlled by the military and easily compared to enlistees. With 1 year of ASVAB scores for all officers, the Services would have a good data set to analyze and determine follow-on policy.

Incorporate ASVAB Scores into Accession Decisions. The Army currently administers the ASVAB to officer candidates who go through OCS, and they have established a minimum score of 110. Applying a similar policy to candidates in all Services, therefore, is not a radical departure from the past. Simply cutting a number of the least intelligent candidates, however, is not a solution in itself; to make the average of 2014 equal to the average of 1980, the Marine Corps would have to cut the bottom 57.4 percent of second lieutenants. A minimum

Chief of Naval Operations Admiral Jonathan Greenert and Navy Master Chief Petty Officer Mike Stevens speak to Sailors assigned to Naval Education and Training Command and Training Support Center at Naval Station Great Lakes (U.S. Navy/Peter D. Lawlor)

score, furthermore, risks constraining the Services too much and shifting the balance between leadership, intelligence, and physical fitness too much toward the intelligence pole at the expense of less quantifiable leadership qualities. We must shift the accession balance away from physical fitness (which again has never been shown to have a correlation with officer success) toward intelligence, while keeping a similar weight on leadership.

Study What Qualities an Officer Needs. The military has made wide study of what qualities it needs in enlistees and how to identify and recruit enlistees with those qualities. Similar study should be made of officers. There has already been some recent movement on this front by the Services. For example, the College of Operational and Strategic Leadership at the Naval War College has made it a priority in recent years to study indicators of character and leadership. The Marine Corps has recently discussed introducing "non-cognitive tests" to measure potential motivation or "grit."[30] Measuring these factors has historically been difficult; efforts by the Israeli army to quantify personality traits, for instance, were only partially successful.[31] Determining what weight these factors should have in reference to physical fitness and intelligence is a difficult issue that will require detailed analysis. It may be cautioned in advance, however, that non-cognitive tests cannot simply replace cognitive tests. Ceasing to measure officer intelligence just because we do not like the results we get would be a dereliction of our moral duty.

Study How to Attract Intelligent Officers. Brad Carson, now the Undersecretary for Personnel and Readiness, has stated that the first lesson from Operations *Enduring Freedom* and *Iraqi Freedom* is that the "Army must continue to develop agile and adaptive leaders capable of operating with disciplined initiative. This is especially important at the junior level."[32] So far, however, the Force of the Future initiatives appear to be an increase in officer incentives with a vague goal of "competing with Google." If we simply increase incentives without knowing what we want, we will end up with a more expensive version of the force we currently have. These initiatives need to be more focused based on what qualities we want, and general intelligence must be one of these qualities.

Conclusion

According to Marine Corps Doctrinal Publication 1, *Warfighting*, "A leader without either interest in or knowledge of the history and theory of warfare—the intellectual content of the military profession—is a leader in appearance only. Self-directed study in the art and

science of war is at least equal in importance to maintaining physical condition and should receive at least equal time. This is particularly true among officers; after all, the mind is an officer's principal weapon."[33]

Many observers may recoil at the results of this study, arguing instead that our young officers today are superb: fit, disciplined, and enthusiastic. And they are. The problem is that these qualities, while sometimes a refreshing change from the civilian world, are not enough. The young officers also need to be highly intelligent to adapt to changing circumstances, learn to operate in a highly complex environment, and lead an increasingly sophisticated enlisted force. These qualities are often hard for decisionmakers to see in the large group interactions that senior officers and officials have with junior officers.

The sea change in American higher education has had a "freakonomics"-type effect on the quality of our military by lowering the average intelligence of officers. The decline of officer intelligence is dangerous for America on two levels—in the near term by providing less capable junior officers and over the long term by not generating the strategic thinkers that America needs. The instinctive reaction of many members of the military will be to circle the wagons and deny that there is a problem. We cannot allow this to happen, however, if we truly want an effective military. The arguments for reform gain a lot of weight from the revelation of the declining intelligence of our officer corps. This need not just be a crisis; it can be an opportunity, and one that we seize completely and decisively. **JFQ**

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Airman assists healthcare worker in donning personal protective equipment to work in Ebola treatment unit (U.S. Army/V. Michelle Woods)

Fighting Ebola
An Interagency Collaboration Paradigm

By Ross F. Lightsey

Our daily contact with key Liberian government ministries helped us to understand the government's plan to contain the Ebola virus, and enabled us to develop critical relationships in keeping lines of communication open, which allowed us to apply resources at the right place at the right time to fully support their plan.

—**Major General Gary J. Volesky, USA**
Commander, Joint Force Command–Operation *United Assistance*

An old fable tells that a single stick by itself is weak; bundled with others, however, the stick will be much stronger. Likewise, during the world's 2014–2015 response to the Ebola crisis in Liberia, interagency, intergovernmental, and international forces were strong and firmly united, moving forward with a singular agenda. If, on the other hand, all 100-plus organizations had not been united by the Liberian government to stamp out Ebola, the effort would have been weak and ineffective.

Many organizations, institutions, teams, and individuals came to assist Liberia in stopping the spread of Ebola, as the Liberian government took the

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lead in harnessing resources and funding, corralling numerous aid workers, and providing leadership in the implementation of a strategic healthcare plan. The Liberian government accomplished this through a unifying process that was labeled the Incident Management System, which was a clearinghouse of meetings and decisions made at the National Ebola Command Center (NECC).[1] Having shared equities, the joint, interagency, intergovernmental, multinational (JIIM); nongovernmental organization (NGO); and economic communities came together and became a true force.

On September 16, 2014, President Barack Obama conveyed four goals to combat Ebola:

- control the outbreak
- address the ripple effects of local economies and communities
- coordinate a broader global response
- urgently build up a public health system in these countries.[2]

The goal of coordinating a broader response later included providing unified and coherent leadership by having the U.S. interagency community and military support the efforts of the Liberian government. With that said, the collaborative atmosphere lent significant confidence to the international community in the competence of the unified partners who were tackling the tasks at hand. The American people needed this confidence with a unified leadership as the fears of Ebola were rapidly growing in the fall of 2014.

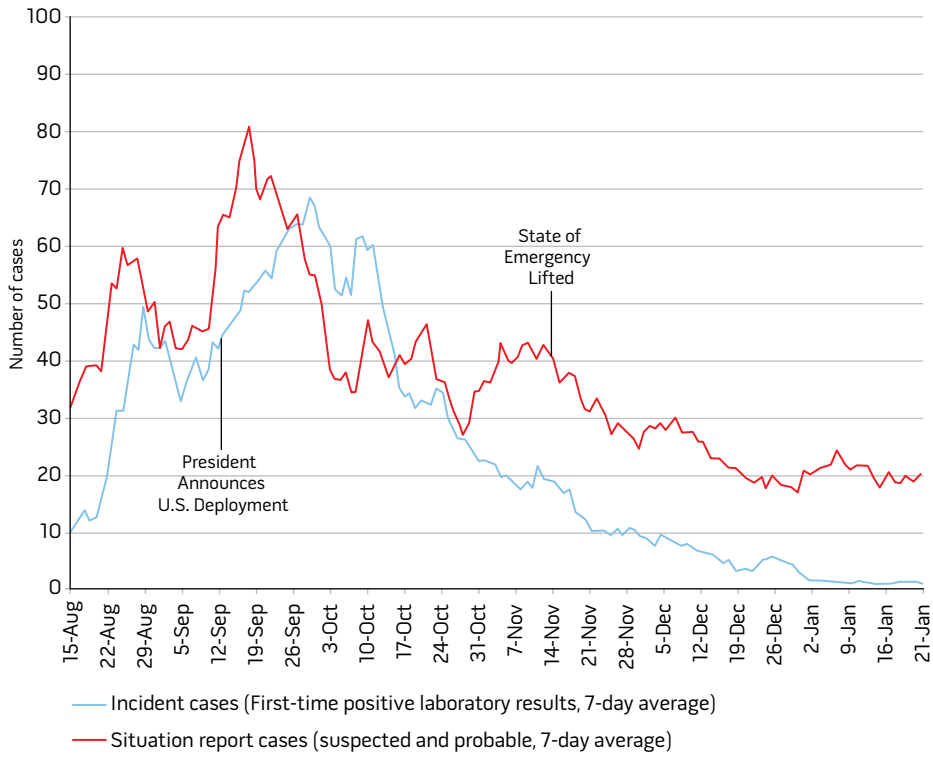
The deployment of the 101st Airborne Division (Air Assault) headquarters and applicable units, with 2,692 Soldiers at peak manning in both Liberia and Senegal, formed Joint Force Command–United Assistance (JFC-UA), which supported the Liberian government and the U.S. Agency for International Development's (USAID's) Office of Foreign Disaster Assistance (OFDA) and, more specifically, a USAID/OFDA Disaster Assistance Response Team (DART). JFC-UA was tasked to:

- construct Ebola Treatment Units (ETUs) across the country
- train indigenous and international healthcare workers
- build a healthcare worker–specific ETU
- sustain collective Ebola logistical requirements.

The end result was a greatly diminished Ebola transmission rate in Liberia.

Upon the arrival of U.S. troops in Liberia in September 2014, the rates of Ebola infections were approximately 367 new cases per week; upon their departure in March 2015, however, new cases were less than 2 per week (see figure 1). In short, JFC-UA in support of USAID efforts, coupled with other U.S. interagency partners and the international community writ large, banded together to focus on one task: eliminate Ebola in Liberia.

Figure 1. JFC-UA Ebola Tracking Chart



Understanding Ebola and Military Application Background

The word *Ebola* is derived from the Ebola River Valley in the Democratic Republic of the Congo, where the initial 1976 outbreak of the disease occurred.[3] It has existed for decades but has been generally contained with varying degrees of success in other African regions. In humans, Ebola is typically spread through bodily fluids, similar to HIV. Although Ebola is not an airborne disease, it has a high rate of transmission among humans, especially with physical contact of dead tissue or person-to-person contact (transmittable only if one has Ebola and is symptomatic and permeating Ebola). Because of the rapid transmission rate and unprecedented outbreak in West Africa, Ebola became a global concern and was deemed a matter of national security by President Obama.

In July 2014, American fears of Ebola were validated when a missionary doctor contracted the disease and was medically evacuated to the United States. In September, the incident at Texas Health Presbyterian hospital in Dallas increased concern as a nurse contracted the disease while treating Thomas Eric Duncan, a

Figure 2. Joint Force Command (JFC) Task Organization: Mission-Specific Construct

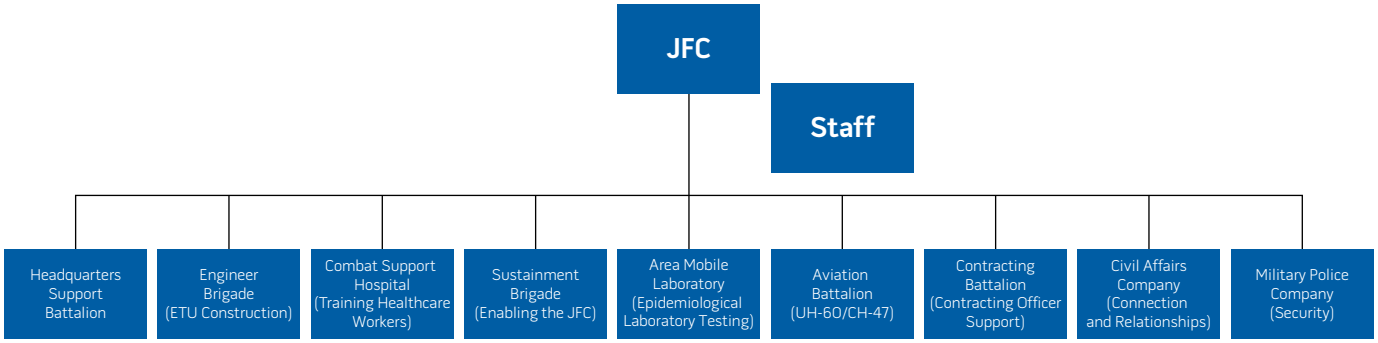
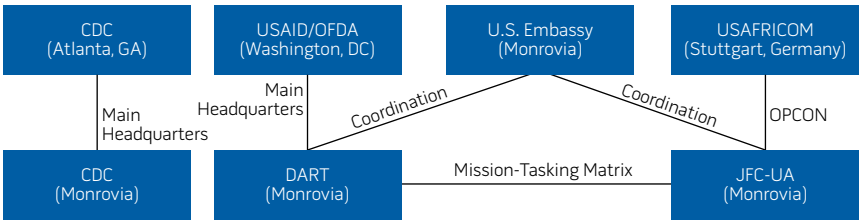


Figure 3. Relationship Diagram of Major U.S. Partners in Fighting Ebola



Liberian who was the first to be diagnosed with Ebola in the United States. Fear in the American populace caused the President to act decisively and quickly.

The U.S. Response

In his September 2014 speech, President Obama announced his plan to use 3,000 troops in West Africa to support USAID as the lead Federal agency. He spelled out that the troops would primarily operate in Liberia and would be supported from an air bridge out of Senegal. Immediately, U.S. Africa Command (USAFRICOM) and U.S. Army Africa (USARAF) began on-ground assessments and also initiated the Joint Operation Planning Process (JOPP) to determine what kind of military capabilities were required, what support mechanisms would be needed, and where to place the troops in respective countries. In all of this, USAFRICOM and USARAF staff worked closely with USAID/OFDA and the Centers for Disease Control and Prevention (CDC) to determine what the tasks were and what Request for Forces would be sent to the Office of the Secretary of Defense (OSD).

The 101st Airborne Division (Air Assault) was chosen to lead the effort by providing a division-level staff to direct and manage various units derived from 16 different installations. The coordination and synchronization in bringing these various entities together were daunting, but were a definite requirement as the specialty fields (such as epidemiologist) do not solely reside within a U.S. Army division headquarters or Brigade Combat Team.

Unique Training

So how do an Army division staff and applicable units train for such a deployment? Of course, the applicable units at their respective U.S. locations conducted mandatory donning and doffing training for protective equipment and some standard predeployment training. Preparation needed more than tactile training, however, as we defaulted to an educational approach in learning about Ebola itself, the culture and leadership of Liberia, and our operational environment (including our JIIM partners). We also reached out to interagency partners (USAID and CDC), as well as various international governmental organizations (United Nations [UN] Mission for the Ebola Emergency Response and World Health Organization).

To educate the command and staff, a 2-day Interagency Academics Seminar was developed by the Mission Command Training Program at Fort Leavenworth, Kansas, and the division G9. This seminar brought together USAID/OFDA, CDC, Department of State, UN, U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID), Department of Health and Human Services (HHS), and U.S. National Institutes of Health (NIH).

JFC-UA Composition

Noted earlier, USAFRICOM and USARAF developed the manning requirements through the JOPP with inputs from USAID/OFDA and CDC. Those involved planned products to tackle Ebola through the training of volunteer healthcare workers, constructed ETUs, sustained military logistical requirements, and assisted the international community with logistical requirements. The task organization was developed by function or enabling support (see figure 2).

Liberia: An American Extension

One of the best explanations for rapid success in Liberia was working with a supportive government that has close ties with the United States and other Western nations. A considerable portion of the Liberian leadership is Western educated, and its military receives training in the United States. For example, the primary driver in the Liberian Ministry of Health (MoH) was educated at The Johns Hopkins University, and a senior commander within the armed forces of Liberia is a 2012 graduate from the Command and General Staff College at Fort Leavenworth.

Liberia is primarily an English-speaking country, predominantly Christian, has a similar governing constitution and democratic process (executive, legislative, and judicial branches), and retains many American cultural norms due to its historical ties with the United States. These close ties date back to the antebellum years when freed slaves from the United States established Liberia.[4] As a result, U.S. efforts were well received, making communication, coordination, and collaboration more fluid.

Working in a permissive environment and operating with a supportive indigenous populace, U.S. preparation for language and cultural training in a standard contingency premission training model was nearly moot. This environment was unique in that the U.S. military directly supported the USAID/OFDA DART. Working together, both the DART and JFC-UA coordinated all operations in Liberia through the U.S. Ambassador in Monrovia.

JFC-UA reported to USAFRICOM for military-related tasks and management of Ebola resourcing through the overseas humanitarian, disaster, and civic aid lines of accounting. Furthermore, logistical support, budgeting allocation, military orders, transportation, and other military operations were coordinated through USAFRICOM.

USAID/OFDA operated on the ground via the DART, which was responsible for coordinating the interagency response, assessing the situation, and identifying gaps in response efforts. The DART was comprised of staff from various U.S. agencies, including USAID/OFDA, CDC, and HHS (see figure 3). USAID used the Mission Tasking Matrix (MITAM), a mechanism used to request operations from the DART to JFC-UA. It was developed by USAID and is a standard procedure for validating, prioritizing, submitting, and tracking requests for Department of Defense (DOD) support during disaster responses. Some of the validated requests were forwarded from the DART Civil-Military Affairs Coordinator/MITAM Manager to the JFC for review and execution at the lowest level, but some of the MITAM requests were from USAID to OSD at higher levels. Regardless, the MITAM process was vetted, validated, and coordinated at the applicable parallel chains of authorities.

Building Civil-Military Relationships

Many questions were asked about how multiple, unrelated entities built such a solid foundation by working together. One answer: do not get fixated on what you are wearing, whether a vest, tie, or military uniform. Rather, focus on solving the problem facing all. Moreover, do not worry about who receives credit in the various tasks at hand, but stay on-task and be passionate about the one common goal—eliminating the threat of Ebola.

In Monrovia, the DART consisted of approximately 20 experienced disaster relief personnel in the Ebola fight, whereas at peak manning, 2,453 personnel were assigned to JFC-UA ("boots on the ground" in Liberia), a huge variance in capacity and capability between the two. So how do we collectively integrate operations with such a huge disproportion in personnel and logistical footprints? First comes communication, then coordination, then ultimately collaboration.

To have communication among these entities, having strong, experienced, and knowledgeable liaison officers (LNOs) is a must. An LNO can assist in staffing requirements and can be a strong strategic voice to speak on a unit's behalf. The DART had solid civil-military LNOs, as well as JFC-UA, which contributed experienced and competent LNOs that had previous exposure to interagency and U.S. Embassy operations. It is important that the LNOs to be exchanged are able to articulate operations through effective communication as well as expressing the command message.

To ensure transparency, there were some growing pains in communication at the initial onset of the operation. JFC-UA and DART tackled this communication gap by having daily meetings at the Embassy with the command group and Chief of Mission (U.S. Ambassador), semi-weekly interagency synch meetings, and nightly operations-synch meetings with the DART MITAM managers. Furthermore, to reach a consensus in having a common language, an "Ebola synch matrix" was collectively established between DOD elements and the interagency community to assist in mapping the fast-paced construction of the ETUs, training healthcare workers, establishing Army medical test (verifying Ebola samples) labs, and providing DART-directed logistical support via MITAMs to the international community. This Ebola synch matrix of time-to-task mapping put everybody on the same page and gave a greater shared understanding of impending requirements. Indeed, the level of collaboration between units and organizations is directly proportional to interpersonal skills and open-mindedness to new and different people.

Snapshot of Partners

U.S. Interagency Community and DOD. The DART, Embassy, and JFC-UA were not the limit of American cross-organizational exposure; there were numerous other U.S. interagency partners that were brought into the fold. The largest and most knowledgeable institution that the DART and JFC-UA collaborated with was the CDC. CDC epidemiologists and leadership gave specific insight and direction in how to contain Ebola, if not completely eradicate the disease. Moreover, other institutions greatly contributed to the fight in Liberia: U.S. Public Health Service, Defense Threat

J9 Civil Affairs planner works with local populace in Voinjama, Liberia (DOD)

Reduction Agency, Defense Logistics Agency, Naval Medical Research Center, HHS, USAMRIID, and the NIH. All organizations were tied to one another through LNOs, routine meetings, or other routine dialogue forums. Again, having dedicated communication through physical presence and proximity is key to having a successful collaborative environment.

Intergovernmental Organizations. U.S. involvement in Liberia was only a portion of the total contribution from the international community. For example, the United Nations Mission in Liberia (UNMIL) has over 6,000 peacekeeping troops and police currently stationed throughout Liberia and has an already existing logistical structure and knowledge of key civic Liberian enablers in the field. There were many other organizations, but most notably the newly established UN Mission for the Ebola Emergency Response (UNMEER), whose charter was to have limited authorities over existing organizations in the fight against Ebola through what is termed the UN Cluster System where a unity of effort is pursued within the multiple UN systems.[5] "Clusters" are groups of humanitarian organizations (both UN and non-UN) working in the main sectors of humanitarian action—for example, shelter and health. They are created when clear humanitarian needs exist within a sector, there are numerous actors within sectors, and national authorities need coordination support. Obviously, coordination is vital in disaster responses. Good coordination means fewer gaps and overlaps in humanitarian organizations' work, and coordination ensures a needs-based rather than a capacity-driven response. It aims to ensure a coherent and complementary approach, identifying ways to work together for better collective results.

So accordingly, UNMEER led and managed a Liberia-wide civil-military synchronization effort that included, but was not limited to, JFC-UA civil affairs teams, UNMIL, UN Children's Fund, World Health Organization, World Food Programme, UN Disaster Assessment and Coordination, UN Development Programme, Office for the Coordination of Humanitarian Assistance, UN Humanitarian Air Service, Economic Community of West African States, World Bank, African Union, International Organization for Migration, International Committee of the Red Cross, and African Development Bank.[6] The JFC-UA used the special operations force approach of using existing international and indigenous assets and gained benefits of these supporting infrastructures of knowledge through human engagement.

Multinational Efforts. Excluding UNMIL, which had over 45 nations represented, there were a number of independent efforts from various countries. Most prominent to the collective efforts

between the DART and JFC-UA was the German NGO Welthungerhilfe, which offered to build four ETUs in southern Liberia through DART assistance and funding. This gesture at the beginning of American involvement lent solid evidence of quickly forming multinational relationships. U.S. forces came en masse starting as early as September 2014 and were quickly followed by the Germans, a Swedish contingent, and a Chinese military delegation—all assisting in the construction and manning of ETUs. Again, having shared equities among the international community, the DART, JFC-UA, and Liberia itself benefited from the informal tight band of this ad hoc coalition.

Host-Nation Organizations and Military. In recent combat experiences, the U.S. military conducted multiple civil-military tasks of support to civil administration, where emerging and newly formed democracies had much room for improvement—and, to be candid, these experiences were an uphill battle.[7] However, the Liberian government is extremely competent, educated, and highly organized. The most prominent organization that JFC-UA and DART collaborated with was the Liberian Ministry of Health. On a daily basis JFC-UA and DART sought interaction and communication with the MoH at multiple levels. Furthermore, as social mobilization and psycho-social issues related to spreading the word on the prevention of Ebola, our LNOs attended meetings at the Ministry of Information, Culture, and Tourism.

In addition to the MoH, the government of Liberia relied heavily on its military to help control the outbreak and contain the disease within its borders. Obviously, JFC-UA was the primary interlocutor with the DART and other U.S. organizations as the Liberian military worked closely with JFC-UA to provide security, construct ETUs, and facilitate JFC-UA and DOD operations.

Economic and Commercial Interests. In a JIIM-centric mission, units typically research their PMESII (political, military, economic, social, infrastructure, and information) or ASCOPE (areas, structures, capabilities, organizations, people, and events) analyses throughout planning processes. A deliberate Liberian country study and operational analysis were indeed conducted prior to JFC-UA departure and employment. However, we undervalued the economic aspect in PMESII, as upon arrival we found many commercial investors involved in the fight against Ebola due to profits being adversely affected. Their influence was of notable significance during the initial mass exodus of influential leadership in the summer of 2014 as economic forums began to form. For example, private investors developed the Ebola Private Sector Management Group, where overt information was disseminated and private collaboration between business leaders was initiated.

Another example where private industry proved valuable to the effort was during the initial days of the outbreak. The Firestone Corporation offered JFC-UA partial use of their one-million-acre rubber tree plantation. The facility included its own medical facilities, educational system, security, and essentially its own infrastructural system—all separate from the government of Liberia. Principally, the negative economic impact caused Firestone as well as other corporations (for example, ArcelorMittal, Exxon-Mobile, Severstal mining, Chevron) to have vested interests in tacitly or overtly supporting the Ebola containment effort. With this in mind, do not discount or underestimate the power and influence in the economic industry before, during, or after a humanitarian assistance/disaster relief operation.

Other DOD Agencies. JFC-UA was not the only DOD entity operating within Liberia, as coordination with other institutions was vital. In any joint task force–like system, there may be other DOD entities that are not directly subordinate to the JTF command structure but that will at least have some sort of coordinating responsibility, as efforts will surely need synchronization.

An existing Department of State Partnership Program (Operation *Onward Liberty*), primarily led by the Michigan National Guard, was a separate effort in assisting the training of the Liberian military that had been ongoing for a number of years. Having this background was fortuitous, as the National Guard's "Persistent Engagement" with the Liberian military assisted JFC-UA in sustaining rapport through longstanding military-to-military relationships.[8]

Other DOD efforts in the fight against Ebola included the Defense Logistics Agency, U.S. Transportation Command, and Defense Attaché office resident with the Embassy in Monrovia. There were also nine U.S. military officers assigned to UNMIL. Though they were not directly supporting JFC-UA or Ebola efforts, the UNMIL officers provided excellent connectivity to the 6,000-plus UNMIL force operating in Liberia and coordinated support for JFC-UA.

National Ebola Command Center. Beyond a shadow of a doubt, the center of gravity where collective and collaborative decisions were made was within the NECC, a three-story business building that was converted for a single operations nerve center. Since Liberia is a fully functioning and sovereign state, the Liberian MoH managed the NECC's functions and led frequent Incident Management System meetings. In addition to these meetings, side meetings regarding nationwide logistical coordination, civil-military coordination meetings, psycho-social mobilization strategy meetings, dead body management, the Ebola hotline, and epidemiological surveillance meetings occurred on a routine basis at this location. It cannot be stressed enough that the NECC was the most central location and source of information and was where major cooperation and decisionmaking occurred. If it had not been developed and implemented by the MoH, the opportunity for organizational collaboration would have been hard pressed for success.

Correlation versus Causality?

If one objectively looks at the Ebola trend chart, there is a direct inverse correlation between the arrival of JFC-UA and the regression of confirmed Ebola contractions. It is easy for various insti-

Students in Ebola Treatment Unit Course led by Joint Force Command–United Assistance, diagnose potential patient for symptoms of virus during scenario training, Monrovia, Liberia, November 20, 2014 (U.S. Army/V. Michelle Woods)

tutions to take credit, but there is not enough scientific analysis to determine the actual catalyst and cause in eradicating Ebola. Perhaps the precipitous drop in Ebola rates in the fall of 2014 may not be directly attributed to the arrival of JFC-UA and the DART, whereas the arrival of thousands of U.S. troops, along with hundreds of epidemiological specialists, provided surety, speed, flexibility, but most importantly *confidence* in that the international community was serious about assisting Liberia eliminate Ebola.

We should keep in mind that during the past 15 years, Liberia has had its share of internal strife, and in the summer of 2014 during the mass exodus of expertise, the conditions were ripe for civil disorder. According to a World Bank survey, "Nearly 85 percent report having sold assets, sold or slaughtered livestock, borrowed money, sent children to live with relatives, spent savings, or delayed investments."[9] However, the arrival of over 2,600 U.S. troops, helicopters, trucks, medical personnel, the DART, CDC, and other U.S. interagency efforts collectively conveyed confidence—not only among the Liberian population but also in the international community. The arrival of troops and the DART was a catalyst that brought in other nations, NGOs, international organizations, volunteer healthcare workers, and the return of independent missionary and philanthropic organizations that were previously treating Ebola patients.

As such, the speed of DART and JFC-UA efforts in building the ETUs, training healthcare workers, providing direct funding, and assisting with logistics might have prevented total loss of civil control and order during this tenuous and fragile state of uncertainty. To reaffirm, it would be judicious to caution against attributing direct success related to JFC-UA and the DART, but it would be safe to assume that the arrival of U.S. troops and an overtly collaborative international community played a significant role in the eradication of Ebola in Liberia.

Ebola: Humanitarian Assistance/Disaster Relief, or National Security Threat?

Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms*, defines *foreign humanitarian assistance* (FHA) as "activities conducted outside the United States and its territories to directly relieve or reduce human suffering, disease, hunger, or privation."[10] Moreover, JP 1-02 defines *foreign disaster relief* as "assistance that can be used immediately to alleviate the suffering of foreign disaster victims that normally includes services and commodities as well as the rescue and evacuation of victims; the provision and transportation of food, water, clothing, medicines,

beds, bedding, and temporary shelter; the furnishing of medical equipment, medical and technical personnel; and making repairs to essential services."[11]

Because "disease" is mentioned in the definition of foreign humanitarian assistance, doctrinally this mission could be considered an FHA mission, and not necessarily an immediate disaster relief mission from a tsunami per se. However, one could argue that since there was not an immediate human suffering requirement (such as Haiti in 2010), and coupled with the fact that Ebola was becoming an international pandemic (not endemic) threatening the United States, then it would suffice to label this mission as more of a national security health mission from a strategic perspective, as well as humanitarian on an operational level. Consider President Obama's words: "I directed my team to make this a national *security* priority. We're working this across our entire government, which is why today I'm joined by leaders throughout my administration, including from my national *security* team . . . so this is an epidemic that is not just a threat to regional security—it's a potential threat to global *security*."[12]

In the summer and fall of 2014, the United States was in near hysteria regarding the threat of Ebola. Both Congress and the President were under pressure to act decisively and to root out the source of Ebola fears. These fears were confirmed and reinforced when Thomas Eric Duncan brought Ebola to the United States; when an international pandemic appears to be hitting home, efforts are arguably more rooted in *security* than humanitarian related, as the President clearly noted in his speech.

Also directed by the President, among his four goals to fight Ebola: "to urgently build up a public health system in these countries for the future." Africa is no outsider to epidemiological outbreaks, as healthcare systems are lacking in both capability and capacity. Diseases such as Ebola tend to permeate and cultivate in emerging states. As Dr. Hans Rosling, professor of international health at the Karolinska Institute in Sweden, and other scholars discussed while assisting the MoH in Liberia, Ebola exists due to a general lack of education, lack of healthcare, lack of transportation, lack of information architectures, massive poverty issues, and the resistance to change cultural norms (for example, bodily contact with the deceased during ritual burial practices).

To address the poverty gap, World Health Organization officials and UN Special Envoy on Ebola Dr. David Nabarro lobbied intensely for billions of dollars in long-term development funds to support West African development and economic recovery from the effects of Ebola.[13] To counter the effects of Ebola is a daunting task, to say the least. Regardless, if the global community desires Ebola (or other diseases) to be contained at the root cause and not affect their homelands, it must decide to apply appropriate resources for long-term development in these emerging states.

Liberia is a solid venture in that it has potential for independent economic growth based on natural resources such as off-shore petroleum reserves, vast rubber tree plantations, and minerals. Therefore, as a whole these vast natural resources could sustain international investment and help Liberia re-establish the economic growth that was visibly seen prior to the outbreak.

When a conglomerate of the willing put forth resources to a third-party state, it is absolutely imperative that the host nation takes appropriate leadership responsibilities. When a nation such as Liberia invites aid organizations and essentially takes charge, that allows the international community to focus on working more efficiently together. The first impression in attending the MoH-led meetings at the NECC was that this was not a third-world country line ministry, but in fact was a capable emerging economic state. When the leadership of Liberia stepped forward in pulling together the numerous actors and focusing the international community in one direction, it was in fact banding sticks together to make a stronger and unified community. Ebola was defeated by cooperation and collaboration at all levels, but it would not have been so effective if it were not for the competence of the Liberian leadership. **JFQ**

Notes

[1] Analogous settings would be a national-level civil-military operations center or humanitarian operations center.

[2] "Remarks by the President on the Ebola Outbreak," Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, September 16, 2014, available at <www.whitehouse.gov/the-press-office/2014/09/16/remarks-president-ebola-outbreak>.

[3] CDC, "About the Ebola Virus Disease," available at <www.cdc.gov/vhf/ebola/about.html>.

[4] J.H.T. McPherson, *History of Liberia* (Baltimore: Johns Hopkins Press, 1891).

[5] United Nations, "UNMIL Response and Assistance to the Ebola Virus Disease (EVD), as of October 13, 2014."

[6] United Nations, "Civil-Military Interaction and Use of Foreign Military and Civil Defense Assets (MCDA) in the Context of the Current Ebola Crisis in West Africa," v. 1.0, October 20, 2014.

[7] Field Manual 3-57, *Civil Affairs Operations* (Washington, DC: Headquarters Department of the Army, October 2014).

[8] Ross F. Lightsey, "Persistent Engagement: Civil Military Support Elements Operating in CENTCOM," *Special Warfare* 23, no. 3 (May–June 2010), 14–23.

[9] World Bank, "The Socio-Economic Impacts of Ebola in Liberia," n.d., available at <www.worldbank.org/en/topic/poverty/publication/socio-economic-impacts-ebola-liberia>.

[10] Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms* (Washington, DC: The Joint Staff, November 8, 2010, as amended through November 15, 2015), 93.

[11] Ibid.

[12] "Remarks by the President." Emphasis added.

[13] Kingsley Ighobor, "Billions Now Required to Save Depleted Healthcare Systems," *Africa Renewal Online*, August 2015, available at <www.un.org/africarenewal/magazine/august-2015/billions-now-required-save-depleted-healthcare-systems>.

Marine assigned to Detachment 4th Force Reconnaissance Company jumps from UH-1Y Venom helicopter during airborne insertion training at Marine Corps Air Station Kaneohe Bay, Hawaii, June 2015 (U.S. Marine Corps/Aaron S. Patterson)

Harnessing the Influence of Senior Enlisted Leaders

By Paul Kingsbury

Over the past 11 years I have had the privilege to serve as a senior enlisted leader (SEL) in a variety of billets. I have engaged with a wide audience of enlisted and officer leaders in a variety of formal and informal settings. Although I have been fortunate to work for many officers who valued my skill sets, it has become clear to me that many leaders are not fully harnessing the influence and capabilities of their SELs. SELs today now serve on a much broader scale than perhaps in previous generations, influencing and advising Service and Department of Defense (DOD) leaders and staffs at the operational and strategic levels—but perhaps we have failed to completely consider and effectively communicate the full value we can provide. It is important for commanders to understand the full potential of the SEL position to align expectations and ensure they know how to get "max return on investment" from us; similarly, as SELs, we must understand how our roles and influence change in these billets to ensure we are providing maximum value to our commanders.

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Knowledge, Skills, and Abilities

There are many unique attributes that SELs of any Service possess that leaders should strive to take advantage of. We

have decades of experience dealing with enlisted policy issues from a variety of perspectives and positions within the chain of command. Unlike senior officers, who cycle in and out of command positions over the course of their careers, SELs have consistent "front office" experience because we are consecutively assigned at the command level of leadership. SELs also occupy a unique position outside the chain of command that allows them to stand back from the organization, figure out what works and what does not, and then influence change. We can access, observe, and advise all officer and enlisted personnel within the commander's sphere of influence. SELs have been promoted to their highest pay grade, so they no longer have promotion boards acting as potential behavioral barriers to unfettered advice. Many have degrees in fields such as business and leadership, or have attended advanced professional military education and executive education courses and seminars, and understand how organizations function at the strategic level. Furthermore, SELs are well networked, which contributes to increasing their command's connections and information powerbases, thus improving the command's capacity for effective communication.

Current Perceptions and Utilization

The generally accepted responsibility of a SEL is that of the commanding officer/commander's enlisted advisor and advocate for enlisted Marines, Sailors, or other Servicemembers. I have often seen this captured as "providing advice on all matters affecting the training, utilization, morale, etc., of the enlisted force." Although those descriptions broadly capture some of what we do, I think they fail to fully communicate the broad spectrum of how SELs can be leveraged, particularly those serving assignments at the general/flag level, or those more experienced SELs with multiple consecutive tours as an SEL. There are a number of general/flag officers who think SELs should be the command/tactical-level problem-solver across their force, rather than serve as an operational- or strategic-level asset engaged at that level. For example, some SELs have had supervisors tell them, "Go do what Master Chiefs do" or have had their role captured as "heads and beds." Additionally, some perceptions exist that SELs are trying to be the "number two" in command. These are all indicators of a lack of a consistent, DOD or Service-wide accepted understanding of what the SEL community does or a lack of desire to leverage it.

Following the establishment of the Senior Enlisted Advisor to the Chairman (SEAC) of the Joint Chiefs of Staff position in 2011 under then-Chairman General Peter Pace, it was disestablished under Admiral Mike Mullen. Admiral Mullen believed that he had appropriate DOD-wide senior enlisted perspective through the Service SELs but offered that if someone could explain the value added by the position he would reestablish it. Apparently we could not or did not, but fortunately, General Martin Dempsey realized the potential value and reestablished the position. Understandably, some people have had bad experiences with an SEL at some point in their careers that negatively shaped their perceptions. Some SELs do not live up to the expectation of their roles, but the majority do, and should not be defined by the poor performance of a few. The increased visibility and bad press highlighting those SELs who fail to adhere to our standards further shape perceptions. We also must consider that because of what we do, we often have to challenge existing norms and processes, which can create conflict. Similarly, many senior officers and SELs do "get it," but still miss the chance to leverage the SEL position to its full potential. How can and should SELs be effectively utilized?

Harnessing SEL Influence

In 2007, while I was attending the National Defense University's (NDU's) Keystone course, I consistently asked the enlisted and officer mentors what role and value they thought the SEL provided. Their perspectives helped form how I try to engage and influence as an SEL working for a flag officer.

To Speak to the Force on Behalf of the Commander. One of the privileges and most rewarding roles of being an SEL is getting out and speaking with a wide variety of audiences, both officer and enlisted. During a variety of engagements ranging from site visits to recognition banquets, SELs have the opportunity to communicate what their commander's roles, responsibilities, and objectives are. This not only reinforces what is going on and what the organization does, but it also helps translate the commander's intent. A critical part of speaking to the joint force is to pass on messages that support the commander's strategic communication plan. Since SELs have the unique experience of having served as junior enlisted, they can often package the message in a way that translates well to the force. We can also speak to the force on behalf of the Service (and DOD) since we attend meetings and symposiums that provide insight on broader policy affecting personnel and their families.

To Serve as the Eyes and Ears for the Commander. In this capacity, the SEL speaks to the commander on behalf of the force and observes and reports. Commanders often do not have the time—despite their desire—to engage in frequent, small group discussions; however, SELs do, and thus can get the story behind the PowerPoint briefs and stoplight charts that the commander typically sees. Once the SEL has spoken to the force on behalf of the commander, he should engage in discussions to solicit feedback and identify areas where communication is inadequate, or where policy could be revised in the best interest of enlisted personnel. Examples of broad questions SELs should ask include, "What do you need?" "How can I help?" "What did we get wrong with a given policy change or recommendation?" "What can I provide clarification on?" Answers to such questions provide commanders and their staffs valuable insight and feedback. During visits, the SEL takes a fix on behaviors and conditions they observe that might indicate where resources are inadequate or where leadership attention is lacking. They can provide some valuable "watch team

Navy Senior Chief Fire Controlman stands watch aboard USS *Mustin* (DDG 89) during bilateral training with Republic of Korea navy in waters east of Korean Peninsula, October 2015 (U.S. Navy/Christian Senyk)

backup" and their unique perspective or background might help identify root causes that other leaders miss. It is critical that the SEL maintain transparency when reporting issues they observe in the fleet. This "observe and report" role is one that some officers may find threatening due to our direct access to the boss; communication is key to prevent this misunderstanding. The SEL should ensure that a unit's commanding officer knows they are visiting, and provide specific unit concerns to the unit's leadership as one form of watch team backup. The intent of these visits should not be to identify command discrepancies; rather, they should be to gather a broader pulse on issues such as health of the force, the effectiveness of communication and fiscal effects on readiness, and then provide sound recommendations to the commander.

Engagement with External Stakeholders. One general officer I spoke with captured this role as "getting out of your comfort zone," but I have come to appreciate it as our potential to help advance regional partnerships and alliances. SELs at general/flag levels will engage with military and civilian stakeholders outside of their command structure. Through these engagements they can share information and raise awareness of what our people and organizations do, while forging relationships that provide resources for the enlisted force. As the SEL for Navy Region, U.S. Forces Japan, I gained as much insight from Japanese Maritime Self-Defense Force SELs as I provided. I also learned that they have many of the same challenges that we do, so we were able to have a productive exchange of ideas regarding potential solutions. SELs should work to build strong relationships with allied and partner nation militaries and other U.S. Government and civilian organizations. For example, while serving as an SEL in both Guam and Japan, I developed personal relationships with the leaders of the United Service Organizations, Navy League, and the Japan and U.S. Navy Friendship Association to promote their programs and the value they bring Servicemembers and their families. Commanders who integrate their SEL into these events also have the opportunity to show partner nations the high value the U.S. military places on its enlisted force.

Commander's Confidant. It is commonly understood that the SEL is one of the only people with the experience, access, and trust to provide the boss candid feedback, especially on matters relating to their personal behavior, including perceptions. As I have mentioned, SELs are the only ones without evaluations hanging over their heads, and thus should not be influenced by artificial barriers to telling

Chief Master Sergeant of the Air Force James A. Cody speaks to Airmen of 353rd Special Operations Group at Kadena Air Base, Japan, July 2015 (U.S. Air Force/John Linzmeier)

the truth. We also serve to consult our bosses on how effectively they use their power and influence. We have many opportunities to observe leaders as they engage, observe the response of the organization, and then provide feedback and advice for improvement or let them know they are on target.

Mentoring and Advising Officer and Enlisted Sailors Throughout the Chain of Command. Because of our unique position outside the chain of command, SELs are vested with the ability to provide advice to all officers and enlisted personnel in the command. SELs attend meetings with the commander and staffs and sit on many other councils and committees. We have the experience to provide advice ranging from how the commander could better communicate with his fleet and staffs to how a fellow SEL could be more effective. SELs work to ensure the wide range of programs and resources available to shape readiness and success are promoted, compliant, and effective, and they should serve as a positive and engaged mentor for SELs within their scope of influence. Also, it has been my experience that many civilians working on military staffs can benefit from the advice, feedback, and perspective of the SEL.

Although I have offered five broad roles for SELs, their application will vary depending on the billet being filled. The scope of engagement at each level should align with the scope of responsibility, authority, and accountability of the commander. As SELs progress to billets of increasing influence, the scope of their roles and the stakeholders with whom they engage should be expected to evolve as well.

The Way Forward

There are several things DOD leaders could do to help ensure SELs are being fully harnessed, and this starts with improving communication with both officers and enlisted personnel.

First, instructions and policies that govern the responsibilities and assignments of SELs should better outline examples of the responsibilities, roles, and expectations for SELs working for general/flag officers. For example, the Navy's OPNAVINST 1306.2G, Command Master Chief program instruction, outlines the responsibilities for those SELs working at the unit level, but fails to capture the unique roles and responsibilities for SELs working for flag officers. Many of the nomination announcements do provide role and responsibility descriptions that would be ideal to include during the next revision of our instruction. We should also consider the consistency of the roles and responsibilities among fellow Service SEL programs. During periodic meetings with

Air National Guard senior noncommissioned officers listen to presentations during Stat Tour Senior Enlisted Leaders Fly-In Conference at Joint Base Andrews, Maryland, November 2015 (U.S. Air National Guard/John E. Hillier)

the combatant commanders and Service SELs, the SEAC should encourage information-sharing, exchange best practices, and work to align SEL roles, responsibilities, and protocol, wherever practical. Additionally, officer leadership should take a vested interest in the development and revision of these policies. Many of my peers and I have noticed a lack of awareness by many officers regarding the selection, assignment, and distribution of SELs. Ultimately, we are your assets, and your thoughts and intent should be captured in the Service SEL instructions.

Second, we should look for opportunities to educate and raise awareness of our roles and how we can and should be integrated toward achieving organizational goals. As a community, we need to do a better job of mentoring our fellow SELs who will eventually have the opportunity to serve at the general/flag level, and although every tour for a SEL is at the command level, we must remember that many officers may have limited time working closely with a SEL and might not fully understand what we do. For example, the Master Chief Petty Officer of the Navy (MCPON) recently implemented an Executive Leadership Course designed to indoctrinate potential general/flag-level SELs into their new roles. Is the content perfect? No, but it is a start and will improve as long as we continue to ensure relevant, forward-looking content supported by real-life examples of currently serving SELs. NDU could develop a short online learning module that would be a valuable tool to help indoctrinate SELs into their new roles. We should actively seek formal and informal opportunities to explain to senior officer leadership what we can do. Senior SELs and general/flag officers should continue to speak and mentor at NDU's Capstone course. The Services should also look for other venues where SELs could speak at such as the Flag and Senior Executive Training Symposium or the Navy Senior Leader Seminar. These are all great forums to enhance understanding of what we do and how we could and should be leveraged. Similarly, senior officers who have had an SEL should communicate to their staffs and wardrooms how they value and use them, while explaining ways they integrated them into organizational efforts.

Third, commanders and their staffs should give deliberate thought to, and discuss, how the SEL could be integrated into strategic engagement and communication efforts. Rather than adopting a position of "go do what SELs do," or assuming that the SEL "gets it," wise commanders should take time to reflect on how to leverage their SELs in ways commensurate with their own scope of responsibility, authority, and accountability. Commanders should take time to reflect on how they are currently utilizing their SEL, whether their SEL is engaging

at the appropriate level and being leveraged to their full potential to further organizational objectives. Unfortunately, some organizations fail to consider inviting SELs to events where they can pursue the opportunities I have mentioned. SEL participation in these engagements should be a priority with a defined intention—engagement with a purpose. SELs should not be off on their own agenda; rather, their engagements should be well thought out and complement organizational strategic communication and key leader engagement plans and objectives. Although the commander and SEL may often have to execute "battlefield circulation" alone, their messages must be aligned and should be guided by a well-thought-out plan. We must think about these positions in a broader strategic-level context and avoid the pitfall of expecting performance only at the levels of previous billets. Although we are improving, many of our general/flag-level positions appear largely incorporated as command/tactical-level problem-solvers and communicators and miss opportunities to strengthen warfighting readiness and alliances. We must also ensure SELs continue to be deliberately selected as members of working groups and boards that will make recommendations of lasting impact on enlisted personnel.

Admiral Elmo R. Zumwalt, Jr., described characteristics of the first MCPONs (who were the Navy's first SELs) in his foreword to Charlotte Crist's *Winds of Change: The History of the Office of the Master Chief Petty Officer of the Navy, 1967–1992*: "They learned when to bend and when to stand firm. They adjusted, adapted, and adhered." Forty-seven years since MCPON Delbert Black first took office, the Navy's Command Master Chief community has continued to grow in span and influence. The recent decision to name future *Arleigh-Burke*–class destroyer DDG-119 the USS *Delbert D. Black* serves as formal acknowledgment of his legacy and is the result of ongoing advocacy by several former MCPONs. Chief of Naval Operations Admiral Jonathan Greenert challenges and expects us to be "bold and confident leaders" who "stand up and speak when you don't see things right." I would add that we need to also speak when things are working, but could still be better. We owe it to our leadership, to our Soldiers, Marines, Sailors, Airmen, and Coast Guardsmen to take a fix and ensure the SEL role remains relevant as DOD (and the Department of Homeland Security) continues to evolve. For SELs are, as Admiral Zumwalt observed, "Not only the voice of personal experience, but of the broad and ever-changing spectrum of the enlisted experience." JFQ

Chairman and CEO of AeroVironment briefs Chief of Naval Operations Admiral Jonathan Greenert on capabilities and potential applications of Global Observer, a long-range, long-duration UAV, Simi Valley, California, November 2014 (U.S. Navy/Peter D. Lawlor)

Cheap Technology Will Challenge U.S. Tactical Dominance

By T.X. Hammes

The convergence of dramatic improvements in the fields of robotics, artificial intelligence, materials, additive manufacturing, and nanoenergetics is dramatically changing the character of conflict in all domains. This convergence is creating a massive increase in capabilities available to increasingly smaller political entities—extending even to the individual. This new diffusion of power has major implications for the conduct of warfare, not the least of which are the major hazards or opportunities that it presents to medium and even small powers. The outcome will depend on the paths they choose.

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Historical Case

Fortunately, this level of technological change and convergence is not unprecedented. From 1914 to 1939, there were technological breakthroughs in metallurgy, explosives, steam turbines, internal combustion engines, radio, radar, and weapons. In 1914, at the beginning of World War I, battleships were considered the decisive weapon for fleet engagements, and the size of the battleship fleet was seen as a reasonable proxy for a navy's strength. The war's single major fleet action, the Battle of Jutland, seemed to prove these ideas correct. Accordingly, during the interwar period, battleships received the lion's share of naval investments. Navies took advantage of rapid technological gains to dramatically improve the capabilities of the battleship. Displace-

ment almost tripled, from the 27,000 tons of the pre–World War I U.S. *New York*-class to the 71,660 tons of Japan's *Yamato*-class. The largest main batteries grew from 14-inch to 18-inch guns with double the range. Secondary batteries were improved, radar was installed, speed increased from 21 to 33 knots for U.S. fast battleships, cruising range more than doubled, and armor improved. Yet none of these advances changed the fundamental capabilities of the battleship; they simply provided incremental improvement on existing strengths. This is typical of mature technology—even massive investment leads to only incremental improvement.
In contrast, naval aviation was in its infancy in 1914. Aircraft were slow, short-legged, lightly armed, and used primarily for reconnaissance. Air combat was primitive; one early attempt involved a grappling hook. Military aviation made great strides in tactics, technology, and operational concepts during the war. Yet after the war, aviation, particularly naval aviation, remained auxiliary and was funded accordingly. The American and British governments focused most of even this limited investment on heavy bombers. Despite this neglect, by 1941 carrier aviation in the form of fighters, dive bombers, and torpedo bombers dominated Pacific naval warfare. Most of the advances in aircraft design and production that applied to naval aviation were developed for civilian uses. Aircraft production was a wide-ranging and highly competitive business that led to these rapid technological advances. Relatively modest investment in these new technologies resulted in massive increases in aircraft capability. As a result, during World War II, aircraft—the small, swift, and plentiful weapons of naval forces—could swarm and destroy the less numerous but powerful battleships. By mid-1942, the battleships were reduced to expensive antiaircraft and naval gunfire platforms.

It is important to note, however, that the transition took nearly 20 years. Thus the early investment in battleships was correct. The failure lay in not understanding when the character of naval warfare changed and naval aviation capabilities exceeded those of the battle line. Interestingly, there was also relatively little investment in submarines, the other powerful newcomer to naval battle. Submarines progressed from a fragile but deadly weapon system in World War I to one that almost defeated Britain and did destroy Japanese industry in World War II. It is essential to remember that institutional biases can keep investment focused on the dominant technology even as multiple emergent technologies clearly challenge it.

Evolving Technologies

We are in an area of rapidly evolving technologies that, when combined, may well radically alter the way we fight. This article is much too short to even begin to explore the explosion of new technologies that are daily changing our lives. But it will take a look at a few that will have short-term effects on how wars are fought. This article also considers how they may come together to change conflict.

Additive Manufacturing. In the last few years, additive manufacturing (AM), also known as 3D printing, has gone from an interesting hobby to an industry producing a wide range of products from an ever-growing list of materials. The global explosion of AM means it is virtually impossible to provide an up-to-date list of materials that can be printed, but a recent Top 10 list includes metals such as stainless steel, bronze, gold, nickel steel, aluminum, and titanium; carbon fiber and nanotubes; stem cells; ceramics; and food.[1] In addition to this wide range of materials, AM is progressing from a niche capability that produces prototypes to a manufacturing industry capable of producing products in large quantities. The United Parcel Service (UPS) has created a factory with 100 printers.[2] The current plant requires one operator per 8-hour shift and works 24/7. It accepts orders, prices them, and then prints and ships them from an adjacent UPS shipping facility the same day. UPS has plans to increase the plant to 1,000 printers in order to support major production runs.

At the same time, AM is dramatically increasing the complexity of the objects it can produce while simultaneously improving speed and precision. Recent technological developments indicate industry will be able to increase 3D printing speeds up to 100 times, with a goal of 1,000 times—all while providing higher quality than current methods.[3] In January 2015, Voxel8 revealed a new printer—with a cost of $8,999—that printed a complete, operational unmanned aerial vehicle (UAV) with electronics and engine included.[4] In February 2015, Australian researchers printed a jet engine.[5] Furthermore, the very nature of AM reduces the price of parts because there is little or no waste. With subtractive (or traditional) machining, one starts with a block of metal and cuts it to the correct form, wasting a great deal of material. With AM, material wastage is near zero; thus it may be cheaper to make a part from titanium using AM than from steel using traditional machining. Only two decades old, AM is starting to encroach on a wide range of traditional manufacturing.

Nanotechnology. Another field that is advancing rapidly in many areas is nanotechnology. Two of these technologies are of particular interest. The first is nanoenergetics or nanoexplosives. As early as 2002, nanoexplosives generated twice the power of conventional explosives.[6] Since research in this field is "Close Hold," it is difficult to say what, if any, progress has been made since that point. However, even if 2 times is as good as it gets, a 100 percent increase in destructive power for the same size weapon is a massive increase. Much smaller platforms will carry greater destructive power. The second area is that of nanomaterials. This field has not advanced as far as nanoenergetics, but the potential for nanocarbon tubes to dramatically reduce the weight needed for structural strength will have significant implications for increasing the range of UAVs. In a related field, numerous firms are applying nanomaterials to batteries and increasing their storage capacity.[7] In fact, a recent accidental discovery may triple battery power storage and increase battery life by a factor of

Marines with Combat Logistics Battalion 5 return after learning about downward thrust of Kaman K1200 ("K-MAX") unmanned helicopter during initial testing in Helmand Province, Afghanistan (U.S. Marine Corps/Lisa Tourtelot)

four.[8] At the University of California, San Diego, researchers have found a cheap way to coat products with a super-thin, nonmetal material that manipulates light and radar waves.[9] These improvements in energy storage, materials, and explosives will lead to increases in range, payload, and stealth for a wide variety of vehicles, including inexpensive UAVs.

Space-Like Capabilities. The addition of cheap, persistent space-based and air-breathing surveillance will provide the information necessary to employ these new technologies. In space, several companies, including Skybox Imaging, which was recently purchased by Google, are deploying cube satellites. Their goal is to sell half-meter resolution imagery with a revisit rate of several times a day—including interpretation of what the buyer is seeing.[10] A buyer could literally track port, airfield, road, or rail system activity in near-real time. Initially, Skybox and other cube satellite companies achieved low-cost launch by serving as ballast on larger rockets. Today, New Zealand's Rocket Lab is proposing to conduct weekly launches specifically for cube satellites to allow rapid and inexpensive launch. Although Rocket Lab has not yet opened its space port, numerous firms have signed up for its services.[11]

Other firms are working on systems that can duplicate the communications and surveillance functions provided by satellites. Google's Project Loon is attempting to provide reliable, cost-effective Internet services for much of the southern hemisphere by deploying a constellation of balloons that will drift in the stratosphere.[12] High-Altitude, Long-Endurance (HALE) UAVs are another avenue to satellite capabilities without the satellite. The U.S. Air Force has successfully tested the Global Observer UAV to conduct surveillance and intelligence operations.[13] For very long endurance, several organizations are pursuing solar-powered UAVs.[14]

Artificial Intelligence. Two areas of artificial intelligence (AI) are of particular importance in the evolution of small, smart, and cheap weapons: navigation and target identification. The Global Positioning System (GPS) has proven satisfactory for basic autonomous UAV applications such as the unmanned K-MAX logistics helicopter used by the Marine Corps in Afghanistan.[15] However, GPS will be insufficient for operations in narrow outdoor or indoor environments, dense urban areas, and areas where GPS is jammed. Academic and commercial institutions are working hard to overcome the limitations of GPS to provide truly autonomous navigation for UAVs.[16] Inertial and visual navigation are advancing rapidly and are already inexpensive enough to use in small agricultural

drones.[17] Clearly, the commercial applications for navigating in agricultural areas and inspecting buildings in urban areas could be adapted for military uses. While such a system would serve to get a UAV to the target area, it would not ensure it could hit a specific target. For that, optical or multispectral recognition is essential. There have in fact been major advances in surveillance and tracking software that are more than sufficient for an autonomous UAV to attack specific classes of targets—and perhaps specific targets.[18] Today, AI can identify a distinct object such as an aircraft or fuel truck using onboard multispectral imaging.[19] In short, the AI necessary for many types of autonomous UAV operations currently exists and is operating aboard small commercial UAVs.

AI is the development that makes the convergence of material, energetics, UAVs, and additive manufacturing such a dangerous threat. It is advancing at such a rapid rate that more than 1,000 distinguished researchers signed an open letter seeking to ban autonomous weapons. They stated that "the deployment of such systems is—practically if not legally—feasible within years, not decades."[20] It is exactly that autonomy that makes the technological convergence a threat today. Because such UAVs will require no external input other than the signatures of the designated target, they will not be vulnerable to jamming. Not requiring human intervention, they will be able to operate in very large numbers. They can be programmed to wait prior to launch or even proceed to the area of the target but hide until a specified time or a specified target is identified.

UAVs. Clearly, UAV capabilities have increased dramatically in the last 5 years and, perhaps most significantly, usage has spread widely. Still, small UAVs can carry only a limited payload. This limitation can be overcome via two separate approaches. First is the use of Explosively Formed Penetrators (EFPs).[21] The second (and less technically challenging) approach is to think in terms of "bringing the detonator."

For harder targets, EFPs will allow even small UAVs to damage or destroy armored targets. Weighing as little as a few pounds, these penetrators can destroy even well-armored vehicles. In Iraq, coalition forces found EFPs in a wide variety of sizes—some powerful enough to destroy an Abrams tank. Others were small enough to fit in a hand or on a small UAV.[22] And of course nanoexplosives at least double the destructive power of the weapons.

The primary limitation on production in Iraq was the need for high-quality shaped copper plates that form the projectile when the charge is detonated. Until recently, this was a significant challenge that required a skilled machinist with high-quality tools. However, in the last few years AM has advanced to the point that it can be used to print a wide variety of materials, to include copper.[23] The National Aeronautics and Space Administration has printed a copper combustion chamber liner for a rocket motor.[24] Thus, we can expect small- and medium-sized UAVs to pack a significant punch against protected targets.

The second approach—to bring the detonator—applies to aircraft, vehicles, fuel, and ammunition dump targets. In each case, the objective is simply to detonate the large supply of explosive material provided by the target. Against these targets even a few ounces of explosives delivered directly to the target can initiate the secondary explosion that will destroy the target.

The convergence of the new technologies discussed above may allow these small, smart, and cheap weapons based on land or sea or in the air to dominate combat. Anyone with a television or access to YouTube during the last decade has become familiar with America's use of UAVs both to hunt enemies and to protect U.S. and allied forces. Although numbering in the tens of thousands worldwide, these UAVs represent only the first wave. Like many technologies, early versions were expensive and difficult to operate, so only the wealthy employed them. But over time, technology becomes cheaper, more reliable, and more widely employed. We are seeing this with the explosive growth in commercial UAVs. AM will soon make them inexpensive enough for small companies or even individuals to own a large swarm of simple, autonomous UAVs.

The U.S. Air Force is in fact actively exploring the use of swarms, but is focusing on smart swarms that communicate and interact with each other and other platforms.[25] The U.S. Navy is also pursuing swarming technology with the Low-Cost Unmanned Aerial Vehicle Swarming Technology (LOCUST),[26] as well as small craft.[27] While these programs are vague about how many UAVs they envision being able to employ, recent dramatic cost reductions in each of the needed technologies will increase the number by an order of magnitude. Researchers in England have prototyped a simple UAV body that costs roughly $9 per copy.[28] Researchers at the University of Virginia are 3D printing much more complex UAVs in a single day, then adding an Android phone to produce a $2,500 autonomous UAV.[29] Thus a small factory with only 100 3D printers using the new printing technology noted above could produce 10,000 UAVs a day. The limitation is no longer the printing but rather the assembly and shipment of products. Both processes could be automated with industrial robots. The limitation then becomes preparing the UAVs for launching when they arrive in theater. Preparing and launching thousands of UAVs at a time would require refined organization, planning, and equipment.

Moreover, cheap UAVs will not be limited to the air. In 2010, Rutgers University launched an underwater "glider" UAV that crossed the Atlantic Ocean unrefueled.[30] Such UAVs are being used globally and cost about $100,000.[31] In 2015, the U.S. Navy launched its own underwater glider that harvests energy from the ocean thermocline and plans to operate it without refueling for 5 years.[32] Based on the commercially produced Slocum Glider, a 5-foot-long autonomous underwater research vehicle, it can patrol for weeks following initial instructions, then surface periodically to report and receive new instructions. In short, small sea platforms have demonstrated the capability

of achieving intercontinental range while producing very little in the way of signatures.

Ashore, mobile landmines/autonomous antivehicle weapons are also under development.[33] The natural marriage of improvised explosive devices (IEDs) to inexpensive, autonomous unmanned ground vehicles (UGVs) is virtually inevitable. However, truly autonomous UGVs—those that actually move on the ground—will remain the most difficult challenge simply because land is the most complex combat environment. Thus AI and maneuvering for UGVs require an order of magnitude more capability than for air or sea. In the interim, cheap fixed- and rotary-wing UAVs will provide an inexpensive way to strike ground targets. State and nonstate actors alike can rapidly transition to UGVs that can hunt mobile targets.[34]

Implications for the Modern Battlefield

Irregular War. Unfortunately for nation-states, autonomous UAVs will initially favor less technologically advanced actors because their targeting problem is simpler. For instance, a nonstate actor may not own armored vehicles or aircraft, so its autonomous UAVs only have to find and attack *any* armored vehicle or parked aircraft. It does not have to discriminate but instead simply fly a preprogrammed route to a suspected target area. Target areas for many locations in the world—to include most airfield flight lines—can be determined using Google Maps or Google Earth. Inexpensive optical recognition hardware and software that provide effective target discrimination are also becoming widely available. Thus, once in the target area, the UAV can scan for an easily identifiable target—say, a large cargo aircraft—and then simply crash into it. Limited standoff is also currently available. If the software of a farmer's autonomous UAV can point and shoot a camera, it can point and shoot an explosively formed penetrator.

Skybox Imaging or similar firms will soon provide near-real-time imagery to anyone with a credit card and a laptop. Terrorists and insurgents will be able to conduct initial target studies without leaving their houses. Using Tor and the current version of the Silk Road Dark Web site, they will be able to purchase the systems, too.

Clearly, today's commercial products have demonstrated the ability of an autonomous UAV to reach a target area, but what weapon could it use? Against the thin skin of an aircraft, a simple 3-ounce warhead would be sufficient, so even very small commercial quadcopters could destroy an aircraft on the ground. Against armor, the UAV designer might choose the heavier and more complex explosively formed penetrator. This would require larger quadcopters/UAVs, but would also provide standoff distance. Like most commercial products, for more money, one could purchase more capability in terms of payload, range, and discrimination. Advances in additive manufacturing, composite materials, energy densities in gel fuels, and nanoexplosives indicate that we will be able to build longer range, more powerful, and stealthier UAVs in the immediate future. Unfortunately, almost all of our antiterror physical defenses are based on blocking observation and ground access to targets. UAVs will simply fly over existing defenses. Defending against this threat is feasible but expensive—particularly when the cost of defending against these weapons is compared to the cost of employing them.

In theater, top-down attack UAVs will negate the gains the West has made in survivability against ground IEDs. Even Mine Resistant Ambush Protected and light armored vehicles will no longer protect our people or supplies. Even more troubling, fuel and water trucks are distinctive and vulnerable. A smart enemy could ignore our combat forces and literally fly over them to attack our logistics forces. Operationally, how do we protect ports of debarkation and logistics nodes? How do we defend intermediate supply depots? Overhead cover will work, but that dramatically increases the time, resources, and effort that must be dedicated to logistics support. Of course, the supply vehicles would remain vulnerable while loading and transporting those supplies.

For the first time in history, insurgent groups may well be able to purchase weapons that can project force far outside the area of conflict. Very-long-range UAVs and submersibles give an insurgent the capability to strike air and sea ports of debarkation—and perhaps even embarkation. This will create major political problems in sustaining a U.S. effort. For instance, a great deal of our support into Iraq flows through Kuwait. Suppose the Islamic State of Iraq and the Levant (ISIL) demonstrates to Kuwait that it can deploy UAVs that can hit an airliner sitting at Kuwait International Airport. ISIL states that it will not do so as long as Kuwait withdraws landing rights for those nations supporting Iraq. Similar threats could be made against sea ports. Is the West prepared to provide the level of air defense required to protect key targets across those nations providing interim bases and facilities?

Conventional War. While these systems create a genuine threat to all nation-states, they and their descendants will provide a significant boost to the defense similar to that between 1863 and 1917, when any person or animal moving above the surface of the ground could be cheaply targeted and killed. Defense became the dominant form of ground warfare. UAV swarms may make defense the dominant form of warfare in ground, sea, air, and space domains. UAV swarms will also be able to attack the physical elements of the cyber domain. The advantage will lie with those who can exploit the domains while operating from a heavily defended and fortified position.

Ground Domain. The performance of American and British armored forces in Operation *Desert Storm* and Operation *Iraqi Freedom* showed how well-trained crews with advanced gunnery systems could make short work of poorly trained crews in less-capable tanks. It seemed the combined arms team in the offensive was dominant on the battlefield. Then the 2006 Israeli-Hizballah summer war indicated that well-trained, determined irregulars armed with advanced antitank weapons, particularly guided antitank missiles, could make the defense dominant again in ground warfare. Since then,

conventional ground warfare has become both deadlier and cheaper. Direct-fire gunnery systems have improved and wire-guided and fire-and-forget missiles systems are proliferating, but both are very expensive. In contrast, artillery can now provide much cheaper precision fire. While each Excalibur 155 millimeter (mm) round costs about $100,000,[35] the Army let a contract in 2015 for a new 155mm fuze that makes any 155mm artillery round a precision weapon. Each fuze costs only about $10,000.[36]

The next great leap will be inexpensive UAVs. For much less than the price of a precision fuze, commercially available autonomous UAVs will provide greater range than artillery without artillery's large logistics and training tail. These UAVs, deployed in large numbers, will provide a particularly nasty challenge for ground forces. Autonomous UAVs, which have already demonstrated the ability to use multispectral imagery to identify specific objects, will hunt on their own.

Today, even relatively light forces are dependent on vehicles and helicopters for support. For more than a decade, Western forces have struggled with hunting IEDs to ensure the ability to move about the battlespace. Now IEDs will start actively hunting our forces in the field, vehicles, helicopters, and fuel and ammunition dumps.[37] When we combine simple UAVs with additive manufacturing, ground forces face the real possibility of thousands of UAVs (or UGVs) in wave attacks (see textbox).

Autonomous UAVS will be the most difficult to defeat, but remote control UAVs will most likely appear first. Remote control UAVs, however, no longer require the operator to have line of site to his target. Today even hobbyists are using immersion goggles to control high-speed maneuvering UAVs.[38]

As mentioned earlier, autonomous UGVs will be the most difficult to develop. But they will arrive—early versions may simply be self-deploying mines/IEDs. Later versions may be advances on the Fire Ant and be capable of actively hunting ground targets.[39] This has major implications for everything from force structure to equipment purchases to operational and tactical concepts. Tactically, how does a force protect itself against swarms of thousands of small, smart, inexpensive UGVs?

Sea Domain. Swarms of autonomous UAVs obviously provide a challenge to any naval force trying to project power ashore. The UAVs will not attempt to sink a ship but only to achieve a mission kill. For instance, a UAV detonating against an aircraft on the deck of a carrier or firing a fragmentation charge against an *Aegis*-class ship's phased array radar will degrade that platform's capabilities. Ships' self-defense systems and speed will make them difficult targets. But amphibious or cargo ships have to slow or stop to operate and thus will be easier targets. Moreover, with UAVs achieving transatlantic range already, home ports must now be defended.

Undersea weapons will provide a much greater challenge to navies. There is clearly a movement by middle powers in Asia to establish effective submarine forces. However, a submarine force is expensive, complex, and difficult to operate. Unmanned underwater vehicles (UUVs) may provide a much cheaper deterrent for a middle power. Similar UUVs are being purchased globally for about $100,000 each,[40] but commercial firms are striving to reduce the cost by 90 percent.[41] If developed as a weapons system, they could dramatically change naval combat. Offensively, they can become self-deploying torpedoes or mines with transoceanic range. Defensively, they can be used to establish smart minefields in maritime chokepoints. They can be launched from a variety of surface and subsurface platforms or even remain ashore in friendly territory until needed—then be launched from a port or even a beach. Imaginatively employed, they could be a relatively inexpensive substitute for a submarine force. Clearly such UUVs could be modified to be long-range autonomous torpedoes or even to position smart mines. For the cost of one *Virginia*-class submarine,[42] a nation could purchase 17,500 such UUVs at current prices. If additive manufacturing can reduce the cost of these systems roughly

Is It Possible to Launch Thousands of UAVs?

It is one thing to have access to thousands of unmanned aerial vehicles (UAVs); it is quite another to have the logistics and manpower available to effectively employ them. One method that demonstrates it can be done is a Chinese system that mounts 18 Harpy unmanned combat air vehicles on a single 5-ton truck using a system similar to a Multiple Launch Rocket System.[1] The Chinese can transport, erect, and fire these fairly large UAVs using a single 5-ton vehicle and one- or two-person crew. Initially developed in the 1990s by Israel as an anti-radar system, the Chinese version has a range of 500 kilometers and a warhead of 32 kilograms with multiple types of seeker heads. Both China and Israel have displayed these weapons at trade shows in an effort to sell them to other nations. The system is currently operational with the Turkish, Korean, Chinese, and Indian armies. The Israeli version, the Harop or Harpy 2, has an electro-optical sensor to attack non-emitting targets and an extended range of 1,000 kilometers.[2] One can assume China has made similar improvements to its systems. Thus, by using old technology the capability to launch swarms of UAVs already exists. Furthermore, the Harpy is not a small weapon system. A similarly sized vehicle could be configured to carry over 100 Switchblade-size UAVs or perhaps a thousand mini-UAVs.[3]

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the same 40 percent predicted for satellites,[43] one could buy almost 30,000 such UUVs for the current cost of a *Virginia*-class submarine. Of greater importance, the skills and organization needed to build and employ a glider are orders of magnitude less than those needed for a nuclear submarine.

Sea mines should be a particular concern to trading nations. They have the distinction of being the only weapon that has denied the U.S. Navy freedom of the seas since World War II. Mines first defeated a U.S. amphibious assault—the U.S. landing at Wonson in 1950. While lanes were eventually cleared through the primitive minefields, forces attacking up the east coast of Korea had already seized the amphibious objectives before the first amphibious forces got ashore. After Wonson, the commander of U.S. naval forces noted that the most powerful navy in the world was stopped by weapons designed 100 years ago and delivered by ships designed 2,000 years ago. Not much has changed. In February 1991, the U.S. Navy lost command of the northern Arabian Gulf to more than 1,300 simple moored sea mines that had been sown by Iraqi forces.[44]

Since 1950, mines have become progressively smarter, more discriminating, and more difficult to find. They have sensors that can use acoustic, magnetic, and other signals to attack a specific kind of ship.[45] As early as 1979, the United States fielded CAPTOR mines, encapsulated torpedoes anchored to the ocean floor. When they detect the designated target, they launch the captured torpedo to destroy it out to a range of nearly 5 miles.[46] Today, China possesses "self-navigating mines" and even rocket-propelled mines.[47] We are seeing early efforts to use UUVs to deliver mines. Since commercially available UUVs are already crossing the ocean autonomously, pairing UUVs with mines will almost certainly make it possible to mine sea ports of debarkation and perhaps even sea ports of embarkation, as well as sea lines of communication.

These gliders can also be used against commerce. Launched from shore bases, these systems will allow any nation bordering the South China Sea and its critical straits to interdict trade. While they cannot stop trade, damaging a few ships would cause dramatic increases in maritime insurance rates. To date, no nation has developed a mine-hunting force capable of destroying clearly smart, self-deploying mines with a high degree of confidence.

Air Warfare. For airpower, the key problem will be protecting aircraft on the ground. An opponent does not have to fight modern fighters or bombers in the air. Instead, he can send hundreds or even thousands of small UAVs after each aircraft at its home station. Support aircraft, such as tankers, Airborne Warning and Control System planes, and transports, are even more difficult to protect on the ground. Even if aircraft are protected by shelters, radars, fuel systems, and ammunition dumps will still be highly vulnerable. Range is currently a problem for printed UAVs. However, an Aerovel commercial UAV first crossed the Atlantic in 1998, and the company now sells an extremely long-endurance UAV.[48] The exceptionally rapid increase in commercial UAV capabilities indicates range problems will be solved soon even for markedly smaller UAVs.

While manned aircraft will become more vulnerable due to basing issues, cruise missiles will become both more capable and less expensive. According to the Naval Air Systems Command, the older Tomahawk Land Attack Missile (TLAM) cost $607,000 in fiscal year (FY) 1999 dollars.[49] Today that cost is $785,000 in FY2013 dollars.[50] As noted earlier, Lockheed Martin expects to be able to cut the cost of two new satellites by 40 percent using AM. This has some interesting implications for reducing the cost of complex systems. If we assume that we can obtain production savings similar to those projected for the satellites, TLAMs will cost about $470,000 each. These missiles carry a 1,000-pound warhead for a distance of up to 1,500 miles (Block II).[51] While somewhat expensive, missiles such as these can provide long-range heavy strike—particularly if the warhead uses nanoexplosives. Because they can be fired from a variety of land and sea launchers, they can be either dispersed or hidden in underground facilities (including commercial parking garages) until minutes before launching, thus remaining both immune to most preemptive strikes and much less expensive than ballistic missiles.

The previously mentioned U.S. Air Force experiments using cargo aircraft to launch dozens of UAVs also has a number of interesting implications for the future of airpower. The combination of cheap UAVs and much more capable cruise missiles may offer small and medium-size states antiaccess/area-denial (A2/AD), precision strike, and long-range strike capabilities in the air domain.

Space Warfare. In space, the advent of micro- and cube satellites paired with commercial launch platforms will allow a middle power to develop an effective space program for surveillance, communications, navigation, and even attack of other space assets. In addition to Skybox Imaging and Rocket Lab, Japan's Axelspace Corporation is launching a cube satellite. In this case, the Japanese company launched a $1.9 million satellite to provide navigation assistance in the Arctic. Axelspace Corporation plans to launch a constellation of cube satellites similar to those of Skybox Imaging that will provide hourly satellite imagery of Tokyo's traffic.[52] Surveillance and navigation satellites are thus already within reach of a small or medium power; that power, however, could also choose to purchase the service from a commercial company.

In addition, HALE UAVs, capable of staying aloft for months at a time, and even balloons are being tested by a number of commercial firms as alternatives for providing Internet connectivity and surveillance. The British Ministry of Defence is studying the Zephyr 8, a solar-powered UAV that can fly at altitudes of up to 70,000 feet and provide surveillance and communications at a fraction of the cost of current satellites.[53]

Cyber Warfare. While one would not normally think of UAVs as part of a cyber conflict, it is important to remember that all networks have nodes in the real world. Furthermore, some of these nodes, such as key fiber optic network lines and

C-5 Galaxy cargo hold and intercontinental flight capabilities were major assets for deploying equipment during Operation *Desert Shield* (U.S. Air Force)

switches, are quite exposed. For instance, satellite downlinks and points where fiber optic networks come ashore are both exposed and vulnerable. Smart UAVs provide a way to attack these nodes from a distance.

Offering more potential for precision effects, Boeing successfully tested its Counter-electronics High-Powered Advanced Missile Project (CHAMP) in 2012. CHAMP is a UAV-mounted electromagnetic pulse system that successfully knocked out all electronic targets during its test.[54] Such a system could target specific nodes of an enemy's network, while not damaging friendly nodes.

Strategic Implications

Since *Desert Storm*, there has been a belief that information superiority tied to precision weapons will defeat mass. It certainly allowed numerically smaller allied forces to defeat Iraq's much larger army (twice) as well as to drive al Qaeda and the Taliban out of Afghanistan using a small ground force. However, the convergence of several new technologies seems to be pointing to the revival of mass (in terms of numbers) as a key combat multiplier. The small, smart, and cheap revolution will provide all nations—and some nonstate groups—with capabilities previously reserved for great powers simply because they cost so much.

Western forces have had the luxury of unopposed access to the theaters of operations outside Europe for decades. This monopoly is changing, however; U.S. access will be contested in several domains. We have to ask the question, "Does the strategic cost/benefit calculation change as a result?" When almost any enemy can cause severe damage throughout even a major power's supply, deployment, and employment chains—perhaps even to the ports and airfields of embarkation in its homeland—does the cost of intervention expand nearly exponentially? Just as troubling, the mechanics of moving forces from home bases to the combat zone will become much more difficult. Will other nations provide transit or port rights if it means their homeland is subject to significant attacks? Militarily powerful nations will find their options limited and will be required to rethink how they project power.

Conclusion

The world has entered an era of rapid and converging technological advances in many fields similar to that following World War I. This creates the potential for disruptive shifts by creative applications, especially by combinations of these advances. The key question is whether we will invest in the equivalent of battleships or aircraft. Will our invest-

3-D printed rocket part blazes to life during hot-fire test designed to explore how well large rocket engine components withstand temperatures up to 6,000 degrees Fahrenheit and extreme pressures (NASA/MSFC/Emmett Given)

ments prove exquisite and irrelevant or change the face of conflict? Today's Department of Defense unfortunately seems to be mirroring the navies between the wars. It is applying new technologies in an effort to squeeze another 5 percent of performance out of older weapons while underinvesting in the evolving technologies that are changing the character of contemporary and future conflict.

In contrast to the ever more expensive, extremely high-technology systems, small, smart, and relatively cheap UAVs are creating entirely new challenges across the battlefield. While current U.S. high-technology programs produce fewer and fewer custom-built weapons systems, the convergence of technological advances is resulting in a proliferation of tens of thousands of cheap smart systems. Western nations are struggling to find answers to this challenge—and none of them look like the few and customized programs currently consuming the bulk of major procurement programs.[55]

For small and medium nations, the idea of "small, smart, and many" represents a great opportunity for their investment programs. They can generate many of the capabilities of the most expensive current systems at a fraction of the cost. They may also be shifting the balance to the tactical defensive, which would allow a smaller power to employ effective, affordable A2/AD against a much larger power. They may simply raise the cost of conflict too high for any possible gain.

The critical military functions will remain, but how they will be accomplished will change. Rather than investing everything in a few, exquisite, and very expensive systems, it makes more sense to explore augmenting them and, in time, replacing them with systems that are small, smart, and inexpensive. **JFQ**

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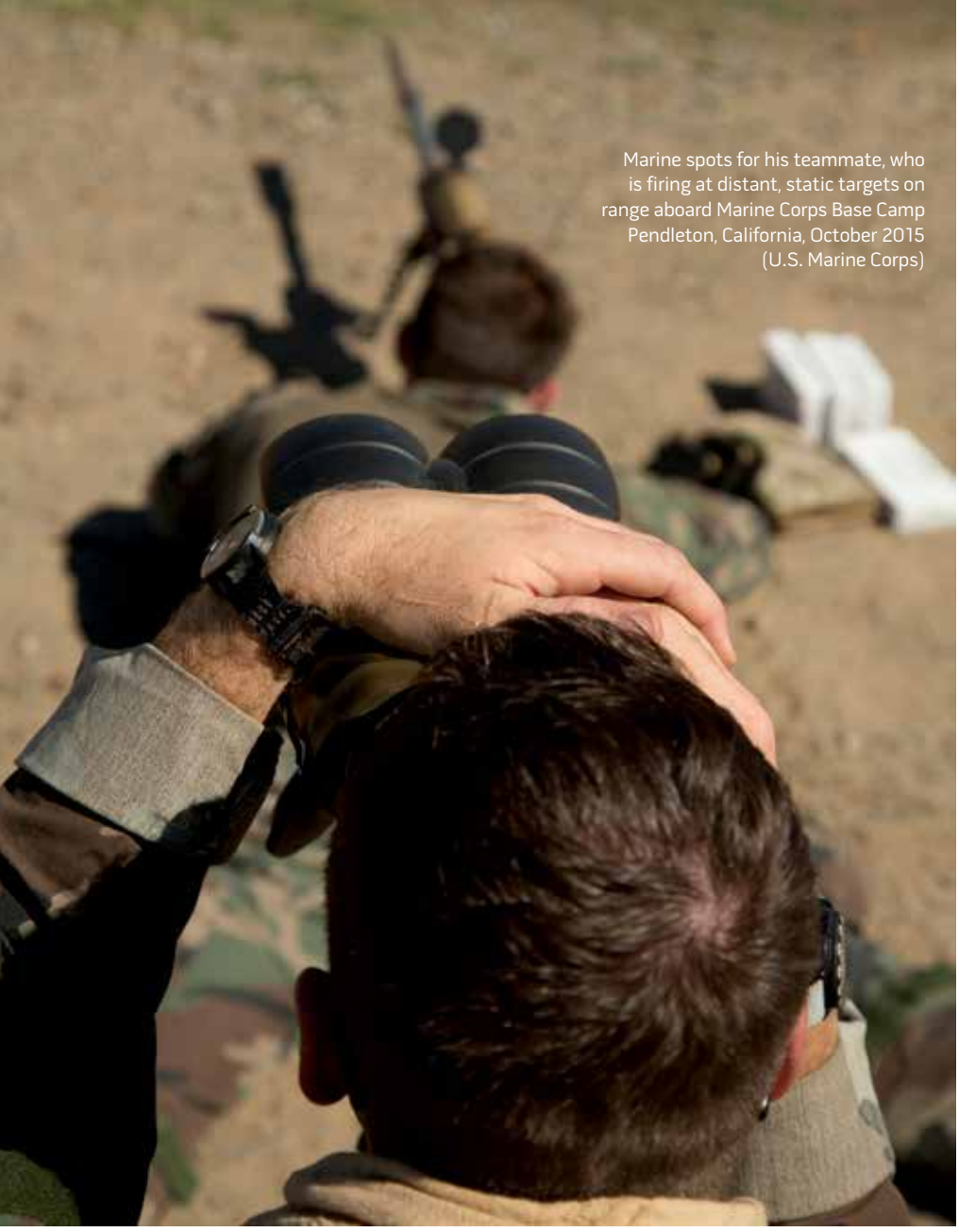

Marine spots for his teammate, who is firing at distant, static targets on range aboard Marine Corps Base Camp Pendleton, California, October 2015 (U.S. Marine Corps)

The Missing Lever

A Joint Military Advisory Command for Partner-Nation Engagement

By Kevin D. Stringer

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With the rise of the Islamic State of Iraq and the Levant and the subsequent requirement to retrain a partially collapsed Iraqi military and provide advisors to moderate elements of the Syrian opposition, the primacy of the military advisory mission for U.S. forces comes again to the forefront. Though the tradition of military advising efforts is ancient, modern U.S. efforts began with Korea and Vietnam and continue with Iraq and Afghanistan. The military advisory mission has proved cost effective with relatively small footprints and inexpensive technologies, while leveraging foreign partners. These characteristics make the advisory focus both attractive and effective in today's sequestration environment.

While military advising is a core competence for U.S. special operations forces (SOF), the conventional military, with greater resources, continues to be called on to address this persistent and growing requirement; however, it does so with ad hoc organizational and personnel solutions that often achieve suboptimal results. Mainstream military culture resists the strategic significance of military advisors and often relegates this mission to a second-tier status. Hence, the Department of Defense must establish a conventional joint subunified command under U.S. Special Operations Command (USSOCOM) focused on the military advisory mission to instill the advisory skill as a core competency for conventional forces and to better support the mission.

Strategic Significance

U.S. advisory activities fall under the umbrella of foreign internal defense (FID) and security force assistance (SFA). At the strategic level, these foreign policy tools are used to reinforce partner nations and engender regional stability.[1] FID supports a host nation's (HN's) internal defense and development to protect its society from subversion, lawlessness, insurgency, terrorism, and other threats to security.[2] FID has traditionally been the purview of U.S. SOF. SFA consists of military activities that "contribute to unified action by

the U.S. Government to support the development of the capacity and capability of foreign security forces and their supporting institutions."[3] It falls in the conventional force realm.[4]

In the FID and SFA context, advising is a preventive measure intended to stop the growth of insurgencies before they grow into severe national security threats for HN governments.[5] By design, such advisory interventions tend to have a small footprint, with military forces providing training, education, and technical assistance to local security forces.[6] In this role, American advisors can serve as efficient combat multipliers for these partner nations in addressing latent, emerging, or existing threats.[7]

Military advisory missions have strategic significance for the U.S. Armed Forces due to their frequency of occurrence and inordinate effect on emerging or existing security threats in relevant partner nations. These missions provide a low-cost investment with enormous leverage that can positively influence and shape the preconflict phase in threatened states, precluding later, more costly interventions. In 2008, then–U.S. Secretary of Defense Robert Gates illuminated the importance of the contemporary military advising mission in an address to Cadets at the U.S. Military Academy at West Point: "From the standpoint of America's national security, the most important assignment in your military career may not necessarily be commanding U.S. Soldiers, but advising or mentoring the troops of other nations as they battle the forces of terror and instability within their own borders."[8]

Gates's comment reflected the historical record and ongoing national security situation, where military advising forms an integral part of America's strategy, either on a grand scale as illustrated in Operations *Iraqi Freedom* (OIF) and *Enduring Freedom* (OEF) or in places of smaller, diverse magnitudes, such as Georgia or Mali.[9] The current world situation—with conflicts erupting throughout Africa, the Middle East, Asia, Europe, and elsewhere, as well as budgetary constraints—requires larger numbers of dedicated military advisors, rather than generalist units, to conduct stability operations and perform peace-building tasks. This world situation suggests that the conventional military will need to cultivate a broad range of advisory skills since America does not have sufficient ground forces to meet all potential commitments and must, therefore, rely on the strategic leverage that foreign troops provide.[10]

Current Deficits

In the past, FID and military advising were traditionally the primary responsibility of SOF. Yet, U.S. SOF units have finite numbers of personnel and multiple operational taskings that preclude them from being the sole resource for such global advisory engagements. While expanding SOF might seem like the logical solution, the rigorous selection process for SOF operators, plus their long train-up period, prevents greatly increasing their numbers without affecting their quality. This means the training of foreign forces will become a core competency of both regular and Reserve units of all Services.[11]

This development trend mirrors the historical experience of Vietnam, where the advising mission eventually exceeded the capability of U.S. Army Special Forces.[12] OEF and OIF have been no exception to this rule. For these campaigns, advisor teams were manned on an ad hoc basis, and the requirement for thousands of mainstream advisors in Iraq and Afghanistan represented a monumental burden and stress for the conventional armed forces.[13] In light of recent Iraqi military performance, the effectiveness of these conventional force ad hoc advisory teams has come into question. Nevertheless, conventional forces, given their larger numbers when compared to SOF, will continue to be required to bear the load for SFA/FID operations in the future, even though their advisory skills may be inadequate.[14]

Unfortunately, the present organizational setup and culture for the military advising mission is sub-optimal. As Secretary Gates acknowledged, the "U.S. military was designed to defeat other armies, navies and air forces, not to advise, train and equip them."[15] Neither the conventional Army nor Marine Corps has established an institutional foundation for specialized combat advisor capabilities, which would include dedicated force structure to advise, train, and assist partner nations.[16] Similarly, the mainstream Air Force relies on ad hoc means to assess and train foreign air arms. Air Force component commands and regional staffs possess little expertise in airpower for FID operations and the associated knowledge of operating in less-developed countries.[17] Equally, the conventional Navy only has minimal and immature constructs for addressing the military advisory mission. Currently, only joint SOF have a truly professional military advisory expertise in their profile. Yet SOF cannot be considered a dedicated force structure for this assignment given other mission sets such as unconventional warfare, direct action, and strategic reconnaissance. Additionally, and already noted, SOF units have limited numbers and cannot meet the demand of increasing military advisory requirements found in today's international security context.

According to Mark Grdovic, a retired senior Special Forces officer and the author of "The Advisory Challenge" and *A Leader's Handbook to Unconventional Warfare*:

U.S. advisory efforts have suffered from an inaccurate perception that they are merely a sideshow effort—somewhat important, but not enough to warrant the diversion of resources from the conventional warfighting capability. . . . In order to be effective, advisory efforts must have the same criticality and legitimacy of all other major operational and strategic efforts within the military. No aspects of a military operation demonstrate its importance more clearly than the recruitment, selection and career-management of the operation's assigned personnel. Recruitment efforts need to be selective and attract only qualified volunteers who possess the unique qualities required of an adviser. During the Vietnam War, General Creighton Abrams observed that U.S. advisers saw themselves as second class citizens in the Army and were treated as such.[18]

Partner-nation members prepare for rifle range during UNITAS Amphibious 2015 at Ilha do Governador, Brazil (U.S. Marine Corps/Ricardo Davila)

This same view permeates the most recent conflicts in Iraq and Afghanistan, where despite the necessity, validity, and value of the unconventional advising mission, the mainstream military marginalized the effort and relegated it to a second-tier status.[19]

The danger with this marginalization approach is that many of the world's conflicts continue and military advising will be the central tool for addressing these struggles. Yet the Services forget the lessons learned over the past decades and exacerbate the organizational memory loss through defunding advisory-relevant training institutions and discarding advisory experience as a career-enhancing qualification in the personnel system.[20] This situation mirrors the Vietnam War, where the mainstream military steadily forgot many of the lessons learned from advising, and this organizational resistance translated into a rejection of the advising mission as a core competence.[21]

To correct such a situation, a joint subunified command is needed. Such an organizational solution takes joint force ownership of the military advisory mission in order to institutionalize such operations within the Department of Defense culture. Equally important, this construct could share lessons learned and be the official proponent for advisory professional education, doctrine, research and applications, and training to keep the military adequately balanced and prepared for future contingencies.[22]

The Need for and Benefit of a Joint Subunified Command

This organizational proposal builds on a rich body of Army, Air Force, and think-tank literature focused on institutionalizing the advisory experience within the U.S. military. While these sources offer a number of different structural solutions ranging from keeping the Army advise-and-assist Brigade Combat Team (BCT) approach[23] to the establishment of a permanent advising training center hub,[24] none explicitly calls for a joint subunified command. Such a command is necessary to make the advising mission joint, specialized, and institutionally mainstream.

While individual Service advisory efforts have, to date, brought some success, the current and future conflict environment requires a joint approach. Land component advisory has occupied the bulk of the discussion, but air advisory to HNs is equally important since the control of the aerial dimension is an enduring advantage most nations have over insurgents and terrorist groups. Similarly, as littoralization increases, naval advisory efforts will become paramount. Here, the U.S. Coast Guard will also be of value since it can "train and assist" for coastal patrol, fisheries oversight, and port security missions, roles that correlate well with the responsibilities of navies in developing countries.[25]

Joint Expeditionary Team advisor teaches Afghan National Army commandos about improvised explosive devices at Camp McCloskey, Afghanistan (DOD)

Equally, a joint military advisory command meets the need for specialization. This is controversial since the Services are loath to move away from general purpose organizations. Reasons for this attitude include institutionalized cultures, budgets, processes, and personnel systems that incentivize a focus only on the main conventional missions for each Service, with all other tasks being viewed as secondary or peripheral. Representative of this perspective on military advisory, two authors wrote, "We believe that discussions to develop a custom-designed advisory force structure to replace the BCTs are moving in the wrong direction. With the proper training focus and enabler augmentation, the BCT structure has the built-in flexibility to perform any mission assigned. There is no need for wholesale force structure redesign."[26] Yet such an approach results in jack-of-all-trade organizations optimized for everything, but truly excellent in no one task.

Unfortunately, considering the history of successful military advising, the mass production of effective advisory skills from generalist forces is illusory.[27] As one study noted, "The structure and function of specialized advise-and-assist units—specifically combat advisors—are vastly different than those of large-scale conventional units designed to wage either maneuver warfare or direct counterinsurgency."[28] Hence, adapting a conventional brigade to the advisory mission is still an ad hoc solution to the challenge. Also, advising HN units and institutions requires specially selected and trained personnel to successfully accomplish these missions.[29] Finally, from an organizational design perspective, a standing organization, regardless of purpose, would likely produce better results than a temporary organization established in response to an emergency.[30] These observations point to the need for specialized joint command for military advisory activities.

To institutionalize this organization, such an entity would be created as a joint conventional force, subunified command under USSOCOM. This placement would embed it within the headquarters with the most advisory experience and allow certain synergies and cost efficiencies to be created. This military advisory subunified command would be led by a general officer, potentially a dual-hatted USSOCOM deputy commander, to oversee the selection, training, deployment, and redeployment of combat advisors.[31] It would possess a staff and school to develop strategic concepts, create doctrine for combat advisors, and provide formal education and training for their operational employment.[32] In addition, advisors would receive further instruction in language proficiency, as well as an in-depth area orientation focusing on religious, cultural, social, and economic concerns.[33] Such a joint military advisory headquarters would provide the necessary

Afghan commando noncommissioned officer gives instruction to junior enlisted commandos at Foreign Internal Defense training in Uruzgan Province, Afghanistan, March 2013 (U.S. Army/Wes Conroy)

unity of command across the Services and combatant commands to achieve synchronization for all advisory activities, while also offering a clearinghouse for advisory experience and lessons learned in regions as dissimilar as Latin America and Eastern Europe. Under current arrangements, this global knowledge transfer among Services and regions is haphazard at best.

The USSOCOM placement would engender more habitual SOF-conventional teaming that would enable the development of deeper advisory expertise, create a cadre of qualified advisory professionals, and facilitate the production of advisory doctrine and common procedures.[34] SOF advisory expertise could flow freely into the subunified command. The structure would also remove conventional advisors from mainstream military commands when assigned to advisory missions, thereby reducing issues of acceptance, priority of mission, and integration.[35]

In addition to the subunified command, the Services would need to support the concept by developing career structures and incentives for advisors. These measures would include creating special skill identifiers for qualified advisors, tracking and managing advisors to use their expertise and avoid filling new advisory requirements with inexperienced personnel, and requiring military advisory experience for promotion to the senior ranks. Based on the historical reluctance of the Services to embark on such steps, external pressure from the Secretary of Defense or Congress is needed to catalyze this process. The December 2015 announcement by the Secretary of Defense to review the Goldwater-Nichols Department of Defense Reorganization Act of 1986 would be an ideal opportunity for evaluating the military advisory function and mission as an integral part of the military personnel system and instituting the needed reforms.

Finally, the establishment of a new subunified command to meet either a functional or regional requirement has organizational precedents in the U.S. military experience. While their justifications differ from the proposed joint military advisory command, Alaskan Command, U.S. Cyber Command, and Joint Special Operations Command are current subunified examples in the force structure. Essentially, by standing up such a command, the Department of Defense would both institutionalize and specialize a part of the overall defense enterprise for a recognized and multifaceted mission requirement that continues unabated. The creation of an advisory subunified command would focus efforts on the complex security challenges faced by U.S. partner nations. If their threats are not properly addressed, then their risks could incubate and ultimately threaten the U.S. homeland. Islamic terrorism and the Ebola virus are but two examples of this phenomenon.

Financing the Command

History has often confirmed that it is not superior weapons but superior organizations that are the most important factor in achieving military success, and often these organizations should be specialized and not all-purpose.[36] Yet in an era of declining military budgets, a new, specialized subunified command appears hard to justify. While the establishment of new commands has merit, critics note such a course of action is both costly and resource intensive, with personnel requirements for joint qualified military officers and supporting civilian and contractor staff.[37]

But there are two strong arguments for approving this business case. First, a military advisory command is an investment in prevention to save on much higher and longer term intervention costs when partner-nation situations get out of control. For example, armed groups of ethnic Chechens confronted the government of Georgia over the Pankisi Gorge region in 2002. To address this subversion, the U.S. Government initiated a $64 million advisory program for the individual and collective training of four battalions of the Georgian army and delivered a consignment of new or refurbished UH-1 Iroquois helicopters to successfully address this threat.[38] To place this expense into context, by June 2006 OIF had already cost 4,500 times as much as the Georgian program.[39] Hence, the example illustrates the much smaller investment required for preventive train, advise, and equip missions that often nip emerging insurgencies or conflicts before they get out of control. A subunified command would be able to synchronize such missions globally and share the lessons learned with other regions of the world.

Second, the costs to stand up a subunified command with long-term impact are miniscule compared to several weapons systems currently under development. Scaling back one of these

projects would free up budgetary funds for a joint military advisory command. A good perspective to this approach is comparing the cost of U.S. Joint Forces Command (USJFCOM) to the F-35 Joint Strike Fighter program. Closing USJFCOM was part of Secretary Gates's push to eliminate $101 billion over 5 years in unnecessary organizations and transfer those savings to weapons programs.[40] While the actual costs of USJFCOM were never exactly determined, the price tag ranged between $400–$750 million.[41] These figures pale in comparison to the F-35 program. As of December 31, 2013, the total acquisition cost of the F-35 program was about $323.5 billion.[42] This equates to an average procurement cost per aircraft (without engine) of $89 million.[43] Although a joint subunified command would cost less than a full combatant command such as USJFCOM, even taking the high figure for a USJFCOM-like structure of $750 million would imply reducing the F-35 program by nine aircraft. Such a reallocation is certainly pragmatic and justifiable if the future security environment is more about personnel-intensive partner-nation interactions than technology and high-end warfare. While this question requires a risk-adjusted answer, recent and current events in Syria, Nigeria, Ukraine, and other locations seem to indicate the former state of affairs, rather than the latter.

Conclusions

The future is about working with partner nations and leveraging their capabilities to suppress security threats before they propagate. The main path for achieving this objective is through the military advisory mission. By creating an affordable joint subunified command under U.S. Special Operations Command, the Department of Defense would take a proactive step to reducing latent or emerging global threats. Through this institutionalization and specialization, ad hoc advisory solutions for general-purpose forces would be avoided and the wealth of advisory experience from Operation *Iraqi Freedom*, Operation *Enduring Freedom*, and other smaller missions would be preserved, transmitted, developed, and enhanced for future advisory endeavors. Overall, this step to a joint advisory command is an excellent financial investment to avoid larger future intervention costs while leveraging other nations' military assets to achieve greater regional and global security objectives. In the end, investment in organizational effectiveness trumps superior weaponry and technology. JFQ

Notes

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[19] Hajjar, "Military Warriors," 647–672.

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[23] See Philip Battaglia and Curtis Taylor, "Security Force Assistance Operations: Defining the Advise and Assist Brigade," *Military Review*, July–August 2010, 2–9.

[24] See Linda Robinson et al., *Lessons from Thirteen Years of War Point to a Better U.S. Strategy* (Santa Monica, CA: RAND, 2014); and Hajjar, "What Lessons Did We Learn," 63–75, specifically 72–73.

[25] For a discussion of littoralization see David Kilcullen, *Out of the Mountains: The Coming Age of the Urban Guerrilla* (New York: Oxford University Press, 2013); FM 3-24, 6-3.

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[27] Anna Simons, "Rebalancing U.S. Military Power," *Parameters* 43, no. 4 (Winter 2013–2014), 35–44.

[28] Barno, Exum, and Irvine.

[29] JP 3-22, VI-33.

[30] Pirone.

[31] For a similar, but more Afghanistan-centric view, see Barno, Exum, and Irvine.

[32] Nagl, 21–26; and Moulton II.

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NATO Secretary General Javier Solana and General George Joulwan meet at Brussels airport with Richard Holbrooke en route for Bosnia as Special Envoy for President Clinton (NATO)

Back to Basics on Hybrid Warfare in Europe

A Lesson from the Balkans

By Christopher J. Lamb and Susan Stipanovich

The complex mix of aggressive behaviors Russia used in Georgia and Ukraine is commonly referred to as *hybrid warfare*, defined by one scholar as "a tailored mix of conventional weapons, irregular tactics, terrorism, and criminal behavior in the same time and battle space to obtain political objectives."[1] North Atlantic Treaty Organization (NATO) leaders fear Russia will use hybrid warfare to destabilize or occupy parts of Poland, the Baltic states, or other countries. They are trying to devise more effective responses to counter such a possibility. Secretary General Jens Stoltenberg asserts that NATO must adapt to meet the hybrid warfare threat.[2] Speaking at the same event, U.S. Secretary

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of Defense Ash Carter agreed and suggested "part of the answer" was "increased readiness, special operation forces, and more intelligence."[3] Several months earlier, Carter's deputy, Robert Work, declared the United States also needed "new operational concepts" to confront hybrid warfare.[4] Meanwhile some NATO countries are establishing special units to counter hybrid warfare tactics,[5] and the U.S. Congress has required the Pentagon to come up with a strategy to counter hybrid warfare.[6]

While senior leaders and scholars continue to debate the merits of the term and its defining characteristics,[7] NATO appears to be in danger of missing the most obvious aspect of hybrid warfare and what it demands. As the term implies, hybrid warfare fundamentally involves an integrated mix of previously separate instruments of power, whether military, diplomatic, intelligence, covert, informational, or other capabilities. An effective response to a multidimensional threat requires an equally well-integrated, multidimensional solution. To successfully adapt in response to Russian hybrid warfare, NATO needs a new cross-functional command and control mechanism that can quickly integrate the Alliance response across its multiple bodies of functional expertise.

Skeptics will doubt this is possible, but NATO has dealt successfully with hybrid threats before, most notably in the Balkans in the mid-1990s. NATO's European and American leaders were initially flummoxed by sectarian fighting that mixed political warfare, propaganda, diplomacy, and military force in a "hybrid threat" to European peace. Eventually, however, NATO, with U.S. leadership, adopted a multidimensional approach to conflict resolution that involved some novel command and control arrangements. One such mechanism was the Bosnia Train and Equip Program. A review of this little-remembered but important success is instructive. It demonstrates why a multidimensional threat requires a multidimensional response, and how small, well-led, and integrated cross-functional teams can spearhead effective responses to hybrid threats.

Countering Hybrid Warfare in the Balkans

In the early 1990s, Yugoslavia disintegrated in the wake of the Soviet Union's demise, releasing a mix of nationalist and ethnic movements. Ill-disciplined combinations of regular and irregular forces struggled to control territory and protect or herd civilians in attempts to produce ethnically homogenous populations, a process widely referred to as "ethnic cleansing." Serb forces, which had inherited the most personnel and weapons from the former Yugoslav army, captured 70 percent of Bosnia and laid siege to Sarajevo. By late 1992, it was clear that the better equipped and trained Serbs were particularly guilty of ethnic cleansing, having placed thousands of Bosniak men in concentration camps and women in "rape camps." They also destroyed non-Serb cultural and religious sites and ransacked and burned non-Serb homes.

In February 1992, the United Nations (UN) Security Council had formed a protective force to facilitate a ceasefire in Croatia and secure conditions for peace talks. In June, the Security Council extended its mission to cover the Sarajevo airport and later widened it again to provide protection of humanitarian aid deliveries. By February 1993, 9,000 UN troops were protecting six specifically designated Bosnian "safe areas" or security zones from Serb forces: Sarajevo, Srebrenica, Goražde, Bihać, Žepa, and Tuzla. NATO backed up the UN forces with promises of air support in case military force was necessary to protect the enclaves.

Meanwhile, European diplomats struggled to find a political solution that would end the fighting. But after two primarily European diplomatic initiatives (the Carrington-Cutileiro and Vance-Owen plans) failed to quell the fighting or stop atrocities, pressure for U.S. intervention increased. Shortly after taking office in early 1993, President Bill Clinton decided on a "lift and strike policy" for Bosnia—that is, lifting the arms embargo and employing limited airstrikes against Serb targets. However, staunch opposition from European allies reversed that decision.

The Clinton administration redoubled efforts to explore diplomatic options for conflict resolution and scored a success by brokering an agreement to end the Muslim-Croat conflict. In March 1994, the Washington Agreement formally brought the two warring ethnic factions together as a single political and geographic entity, creating a Muslim-Croat Federation. A year later, however, President Clinton's chief negotiator for Bosnia, Ambassador Richard Holbrooke, observed that the federation "existed only on paper" and that "friction between the Croats and the Muslims was enormous."[8]

By spring 1995, the Bosnian conflict had taken 100,000 lives and generated more than a million refugees. Concerns about the future of NATO as a strategic alliance and outrage over gross human rights abuses began to soften U.S. public resistance to intervention. Increasing numbers of government officials, Members of Congress, and prominent pundits called for action. Ambassador Holbrooke and an interagency team conducted Balkan shuttle diplomacy looking for a negotiated settlement, but Serb military advantages diminished their incentives for compromise. One event in particular convinced Holbrooke that more military force would be required to bring the Serbs to the negotiating table. In May 1995, NATO responded to Serb attacks on UN safe zones with "pinprick" airstrikes as it had the previous year. However, this time the Serbs responded by taking 350 UN peacekeepers hostage. Holbrooke encouraged the Clinton administration to increase the bombing, but Europeans, particularly those countries whose soldiers were hostages, opposed that course of action.

The Clinton administration began looking for ways to shift the military balance. While formally abiding by the UN arms embargo, the United States tacitly allowed arms to flow to the Bosnians, mostly from majority-Muslim countries in the Middle East. In addition, the United States supported Croatia's efforts to build up its military forces. The Department of State quietly approved

nonlethal assistance to the Croatian Ministry of Defense. The Croatians were assisted by the U.S. company Military Professional Resources, Inc. (MPRI), which was led by former U.S. Army Chief of Staff Carl Vuono.

The United States also lobbied its European allies to accept a mix of diplomacy and military force. American arguments were strengthened by notorious mass killings of Bosniak civilians, including a mortar attack against the Markale marketplace in August 1995. The tipping point was the appalling massacre of more than 8,000 Bosniak men sheltered in the UN "safe zone" of Srebrenica in July 1995. Amidst widespread outrage over the horrific event, U.S. policymakers argued that such merciless disregard for human life and contempt for international peacekeeping forces called into question the continuing relevance of NATO and jeopardized transatlantic security relations.

In August 1995, several military developments finally pushed the Serbs to the negotiating table. First, Croatia launched punishing offensives against the Serbs. The Croatian army evicted Serb forces from the self-declared Republic of Serbian Krajina, producing a large number of Serb civilian casualties and refugee flows. Then, operating in concert with Bosnian army units, Croatian forces routed the Serbs who were occupying other parts of Croatia and Bosnia. And finally, on August 30, NATO launched airstrikes against the Serb targets. After 11 days of airstrikes, the Serbs stopped their attacks on Sarajevo.

Two months later, the United States hosted a peace conference in Dayton, Ohio. President Clinton justified U.S. involvement to the public, stating, "The Balkans lies at the heart of Europe, next door to several of our key NATO Allies and to some of the new, fragile European democracies. If the war there reignites, it could spread and spark a much larger conflict, the kind of conflict that has drawn Americans into two European wars in this century."[9] American and European actors shuttled among the various Balkan factions promising security and aid and working through innumerable contentious issues. Finally, the parties agreed to terms, and the Bosnian, Croat, and Serb leaders signed what became known as the Dayton Accords on December 14, 1995.

The Train and Equip Program. A military assistance program for the Bosnians was part of the Dayton Accords, in part because Bosnian President Alija Izetbegović refused to sign the agreement without a U.S. commitment to train and equip his forces. But the program also had the support of several key Members of Congress and senior Clinton administration officials. As Secretary of Defense William Perry stated in justifying the program, "To achieve a lasting peace in the Balkans, it will be essential to achieve stable and balanced force levels within Bosnia-Herzegovina and among the states of the former Yugoslavia."[10]

The Dayton Accords were widely judged to be fragile. The warring parties were expected to renew fighting if NATO forces left, so the initial 1-year duration for international peacekeeping forces (IFOR) was considered a "waffle of the first order," an impractical, glaring signal that U.S. commitment was limited.[11] The precarious peace and short 1-year IFOR tenure underscored the sensitivity and urgency attached to the Train and Equip Program. The primary objective of the program was to create a military balance of power in Bosnia by offsetting Serb advantages. If IFOR was only going to stay a year, it was imperative the program begin immediately and be executed rapidly.

The United States also intended to use the Train and Equip Program to strengthen the Bosniak-Croat Federation. A key assumption was that cooperation between the Bosnian Croats and Bosniaks on security matters would facilitate progress in other sectors. Without agreement on security, it was difficult to imagine much political progress in the federation. The sooner the Federation Ministry of Defense was integrated and working smoothly, the more likely it was that other aspects of postwar reconstruction would gather momentum.

The final objective of the program was to orient Bosnia toward the West, first by eradicating the growing influence of radical Iranian-sponsored mujahideen, and second by instilling Western civil-military norms and NATO military standards. Congress made the military and economic assistance to the Bosnian government contingent upon Iranian-supported foreign forces leaving Bosnia. Rapidly establishing the Train and Equip Program was meant to give the Bosniaks an incentive to take the politically painful step of dismissing their co-religionists who had flocked to Bosnia to fight with fanatical commitment. However, U.S. leaders would not permit the program to deliver training or weapons until the Bosnian government arranged the departure of foreign fighters.

The Train and Equip Program was controversial from the start. U.S. military leaders feared the program would undermine the impartial peacekeeping image they needed to execute the IFOR mission. They worried Serbs would view the program as blatant favoritism and attack U.S. peacekeeping troops. The Europeans shared this concern and mostly refused to participate. The Europeans believed that if a military balance was necessary, it should be established through arms reduction and control.

Many Balkan experts, journalists, and scholars thought the Train and Equip Program was misguided because the tenuous Bosniak-Croat Federation would be overcome with nationalist ambitions and crumble. The Serbs, of course, agreed that the federation was not viable and that Train and Equip was destabilizing. They promoted the narrative that Bosniak forces were Muslim extremists who wanted to see the establishment of an Islamic state in Bosnia. The Serbs were not alone in asserting that Washington was being duped by wily Muslims. Looking back, one former senior State Department and UN official concluded the Muslims played the United States "like a fiddle."

In sum, other than the U.S. President, a handful of his top national security officials, some strong supporters in Congress, and those directly involved in the Train and Equip Program,

Bosnian President Alija Izetbegović and Croatian President Franjo Tudman sign Washington Agreement, March 1994 (Central Intelligence Agency)

most informed opinion in the U.S. Government and European leadership circles thought Train and Equip was destabilizing and counterproductive. Nevertheless, the program succeeded.

Team Performance, 1995–1998. After the Train and Equip Program was in effect for 18 months, many observers considered it a juggernaut propelling the region toward renewed hostilities. Yet when it began in December 1995, the program seemed anything but a runaway success. Jim Pardew, who had headed the Pentagon's Balkan Task Force and traveled with Holbrooke's interagency negotiating team, led the program. He started with no staff, no budget, no clear requirements, and no committed international support. Armed only with a mandate and drawdown authority from Congress, Pardew went to work immediately after the Dayton agreement was signed. Over the next 2 years, Pardew and his team maintained a workaholic schedule, traveling extensively, overcoming major setbacks, and beating back bureaucratic resistance to secure international donor funds and create a web of private- and government-sector entities to implement the program.

Pardew recruited a small team of seven other people from Defense, State, and the Intelligence Community, some of whom had to eventually leave government service and come aboard as contractors. By August 1995, Pardew had secured an interagency agreement that a Train and Equip Program should be "modest" and concentrate on "defensive capabilities," but the exact size and shape of the program was disputed.[12] So an Institute for Defense Analyses (IDA) team was asked to travel to Bosnia and make a complete assessment of the military balance "to identify priorities for training and equipment improvements; and to develop alternative equip and train packages."[13]

The IDA study team found the Croat and Bosniak armies in dire need of training and basic equipment. The young, battle-hardened troops in both armies suffered from a lack of formal training at all levels. Most of their weaponry was decades old and worn out from prolonged use. Pardew used the IDA assessment to inform a Deputies Committee meeting (a National Security Council staff meeting attended by the second highest officials from all the major departments and agencies) on his program requirements. The deputies approved Pardew's five-page paper laying out policy, goals, leadership, objectives, concept, and next steps for the program on December 28, 1995. They stipulated that training and equipping required Bosniak and Croat commitment to the federation and for Bosniak leaders to sever ties with Iran and mujahideen fighters.

Pardew immediately began looking for financial support to the program. Most of the congressionally mandated

Bosnia Train and Equip: Lessons for Syria?

In early October 2015, the Pentagon announced it was suspending the Syria Train and Equip Program about 9 months after it began. The decision came just 3 weeks after the Commander of U.S. Central Command testified to the Senate Armed Services Committee that only "four or five" U.S.-trained Syrian fighters remained on the battlefield and that the program would not reach its goal of training 5,000 fighters.[1] Labeled a "total failure" by congressional leaders, the demise of the program eliminated a key piece of the Obama administration's strategy to end the conflict in Syria.[2] It is more likely the program would have succeeded if modeled after the Bosnia Train and Equip effort.

Syrian soldiers who have defected to join Free Syrian Army hold up rifles as they secure street in Damascus suburbs, January 2012 (Freedom House)

No two cases are alike, but there are enduring lessons from the Bosnia Train and Equip Program, both for managing complex foreign policy problems in general and security assistance programs in particular. To demonstrate why the Bosnia model would have improved chances for success in Syria, we need to identify the most prominent reasons why the Syria effort failed. Although we are still awaiting an Inspector General's report or some equally authoritative explanation for the poor results in the Syria Train and Equip Program, we already have enough congressional testimony and press exposés to identify several key factors in the failure.

First, the President and some of his key advisors were notably skeptical about the program from the beginning. According to some reports, "President Barack Obama never seemed to want a train-and-equip program for Syrian rebels."[3] "One former administration official whose views are closely aligned with the President," stated the objective of the train and equip program was a "fool's errand," a way to make people feel better about themselves while they watched Syria disintegrate.[4] Lukewarm support from the White House for a controversial program ensures that it will run into trouble with the bureaucracy, and reports indicate it did. One Central Intelligence Agency (CIA) contractor helping the rebels quit, stating, "They're asking us to perform miracles, but they're giving us nothing." Now-retired Lieutenant General Michael Flynn, USA, and former Director of the Defense Intelligence Agency recalls that even small things were hard from the program. The process in Washington was "completely choked. It was always a 'mother-may-I.' And the 'mother-may-I' would take a long time."[5] By contrast in the case of the Bosnia Train and Equip Program, the White House strongly supported the program—even intervening to secure difficult-to-find funding—and the bureaucracy largely got out of the way as a result.

Second, the administration assigned the complex Syria train and equip mission to lead agencies rather than configuring it from the beginning as an integrated interagency effort. It began as a CIA-run covert operation. Then the administration decided to increase the scale and profile of the effort and gave it to the Department of Defense (DOD). Accordingly, in the spring of 2015, Congressional Defense Committees approved $500 million to "supplement or replace a covert CIA-led arming and training program."[6] A major lesson from the Bosnia Train and Equip Program is that security assistance programs in war zones are complex politico-military undertakings. They require multiple, tightly integrated instruments of power. An interagency approach similar to the one used in Bosnia is much better for such highly sensitive, situation-dependent missions. Lead agencies just do not have the breadth of perspective and collective experience to manage multiple instruments of power. They naturally follow their preferred approaches and procedures. A major study of the Afghan and Iraq wars by National Defense University scholars concluded that DOD made the mistake of "trying to create forces that mirror-imaged those of the West" in those conflicts. It "developed ministries and military forces modeled on U.S. institutions," and failed to make the effort "transactional" and "conditional," based on shared objectives and situational variables.[7] It appears likely that the same thing happened in Syria, which brings us to the third major reason for failure.

The third factor cited in critiques of the failed Syria train and equip effort is how divorced it was from local political

realities. Frederic Hof, a former senior advisor on Syria for the Obama administration, notes that the "formula of recruiting people [nationalist rebels] who had been hammered for four years by the [Bashar al-Asad] regime to fight exclusively against [the Islamic State of Iraq and the Levant] was an elegant Washington maneuver totally disconnected from the reality on the ground inside Syria."[8] Many others make the same point, including the Syrians we were trying to train and equip. The Syrian rebels' elected commander, Amin Ibrahim, a former Syrian army lieutenant colonel, was candid about the trainees' tense relationship with American trainers: "I told them the whole idea is wrong. I said, 'We are Syrians. Our problem is with the [Asad] regime. Help us to get rid of the regime.' The response was, 'You should not shoot a bullet against the regime.'" So, he continued, "we all got up and walked out."[9]

As others have noted, political correctness of this kind would have doomed efforts to support French resistance in World War II, where many fighters harbored communist sympathies. Ambassador James Pardew, who led the Bosnia Train and Equip effort, had been working the problem for years and knew all the circumstances and major parties involved well. He resisted political handicaps that would cripple his program—such as the early inclusion of Serbians—and successfully defended his approach multiple times before senior interagency bodies, warning them that a failed effort was worse than no effort at all.

Some will claim Bosnia and Syria are not comparable, and that Syria—an active war zone—presented a tougher set of conditions for security assistance. There are differences, of course, but the relative level of difficulty is not one of them. Bosnia, after all, was notably labeled as "the foreign policy problem from hell," and too tough to tackle. Just like Syria, it involved incredibly brutal internecine conflict and the presence of fighters sympathetic to extremist elements and terrorism who were fighting on "our side." Moreover, American security assistance began while the fighting was still under way, and as the fortunes of war shifted against the Serbians, U.S. diplomacy used battlefield changes to help shape a peace that all parties could support. We cannot be sure that a program modeled on the Bosnia Train and Equip effort would have succeeded. However, it does not take much insight to see that White House support, a full-time interagency team to manage the effort, and program leadership with deep expertise on the Syrian crisis, would have significantly improved chances for success.

Notes

[1] "U.S. Strategy Against ISIS," *C-SPAN.org*, September 16, 2015.

[2] Department of Defense, "Statement on Syria," Release No: NR-392-15, October 9, 2015.

[3] Tara McKelvey, "Arming Syrian Rebels: Where the U.S. Went Wrong," BBC News, October 10, 2015.

[4] Ibid.

[5] Ibid.

[6] Julian E. Barnes, Adam Entous, and Carol E. Lee, "Obama Proposes $500 Million to Aid Syrian Rebels," *Wall Street Journal*, June 26, 2014.

[7] T.X. Hammes, "Raising and Mentoring Security Forces in Afghanistan and Iraq," in *Lessons Encountered: Learning from the Long War*, ed. Richard D. Hooker, Jr., and Joseph J. Collins (Washington, DC: NDU Press, 2015).

[8] Joe Gould, "Was Syrian Train-and-Equip Effort Always a 'Mission Impossible'?" *Defense News*, September 21, 2015.

[9] Roy Gutman, "What Really Happened to the U.S. Train-and-Equip Program in Syria?" *McClatchyDC.com*, December 21, 2015.

$100 million in drawdown authority for Train and Equip would come from Army stocks, including rifles, machine guns, radios, tactical telephones, tanks, heavy artillery, armored personnel carriers, light antitank weapons, and utility helicopters. Otherwise, no taxpayer funds would be used for the program's execution. Thus, Pardew had to appeal to other countries for cash and in-kind donations to finance the remaining $700 million of the estimated $800 million program.

Turkey agreed to host a donor's conference in Ankara on March 15, 1996, shrugging off complaints from the European Union. The conference started well despite the absence of Russia and other key European countries. Thirty-two nations and five international organizations attended, but the conference fizzled. The Europeans extolled the importance of arms control while Muslim countries asserted the right to self-defense. U.S. representatives made eloquent arguments about the fragility of peace and the need to build a deterrent force. In the end, concrete pledges of cash support did not materialize. In Pardew's words, the conference "was a complete disaster."[14]

With time ticking and criticism of the program splattered across newspapers, Pardew turned to the White House. He reminded senior leaders that the program was a personal commitment from President Clinton. The President dispatched his lifelong friend and counselor, Thomas "Mack" McLarty, to the Gulf with a personal request for assistance. A trip to Saudi Arabia, the United Arab Emirates (UAE), and Kuwait on April 14 and 15 netted $115 million in cash. With funding from the Gulf priming the pump, a second trip to Malaysia and Brunei eventually increased program donations to $147 million. Although this was a far cry from IDA's estimated program needs, the Train and Equip team doggedly pursued in-kind donations over the next 2 years, securing pledges from 14 countries valued at another $129 million. In addition to the $100 million in U.S. military assistance, the total value of the program was over $400 million in cash, equipment, training, and technical support.

View of downtown Grbavica, a neighborhood in Sarajevo, March 1996 (Stacey Wyzkowski)

Successfully obtaining funds generated an unforeseen and pressing problem: how to legally spend other countries' money for an American-led foreign military program. Constitutionally, the Executive is not permitted to spend money without congressional approval. It took a unique legal construct and a joint effort by State, Treasury, and the Justice Department to allow those funds to be used consistent with U.S. law and the policy objectives of the Train and Equip Program. A winning formula was found after a number of false starts.

Legal advisors reasoned that because the funds had been given to the United States for a specific purpose, the Department of State could create a common law trust for them. Setting up such a trust allowed the U.S. Government to administer the money but did not give it ownership rights or direct control over how the funds were to be used. Washington would hold the funds in the U.S. Treasury with an affirmative duty to protect the property on behalf of the donors, which meant ensuring the funds were allocated consistent with donor intent. Obtaining support from the Departments of Justice and Treasury ensured broad government support for the funding mechanism.

After securing interagency and donor agreement for this novel approach, the Bosnian Defense Fund was established on April 22, 1996. Through supporting arrangements for administering the funds, including a set of administrative procedures, the program was able to ensure donor funds never passed through Bosnian hands. The funds always went directly for training and equipment that the Bosnian defense leadership agreed was necessary.

Meanwhile, the Train and Equip team had worked hard to put a contract in place for training federation forces. Since the Department of Defense wanted to distance itself from the program, private contractors were used. The federation awarded the contract to MPRI, a decision that had unanimous support. The company was well known for its work in Croatia, and Pardew believed that the company was committed to the mission and took pride in facilitating the execution of U.S. foreign policy. With experience working in the region, MPRI understood the conflict and the challenges it would be facing.

The Train and Equip staff also began negotiating with the Department of the Army on what material could be drawn down from Army stocks. Ultimately, the program secured a wide range of light lethal and nonlethal assistance, including 45,100 M16 rifles, 1,000 machine guns, an assortment of field radios and telephones, and other gear. The heavy equipment included 45 upgraded Vietnam-era M60A3 main battle tanks, 80 armored personnel carriers, 840 light antitank weapons, and 15 Huey utility helicopters.[15] Train and Equip also obtained other items from U.S. excess

defense articles, most notably 116 large towed howitzers.

In addition, team members went shopping throughout Europe and the Middle East, hunting for the best equipment at the best price. Pardew's team secured the help of some Army experts on foreign weapons systems to assess attractive buying options. When possible and cost-effective, the task force also wanted to stimulate the indigenous Bosnian defense industry. It let a contract for the production of Kevlar helmets and small caliber ammunition after ensuring the Bosnians could match a competitive price and obtained approval to buy Bosnian-produced 122-millimeter (mm) towed howitzers.

Most of the weapons had to be obtained elsewhere, though. Western European opposition to the program influenced some Eastern European countries, such as Poland and the Czech Republic, to decline participation. But others, such as Ukraine, Romania, and Slovakia, were eager to sell some of their excess Warsaw Pact equipment for cash. Egypt also offered a heavy equipment donation to the federation, thus seizing the opportunity to be a cooperative ally and possible future seller to the Bosnian military.

In December 1996, the first non-U.S. donation to Train and Equip arrived at the Croatian port of Ploče: 36 105mm howitzers with ammunition and spare parts from the UAE and 12 130mm field guns, 12 122mm howitzers, and 18 23mm antiaircraft guns with spare parts from Egypt. Shortly thereafter, the UAE delivered 44 ML90 armored personnel carriers and 42 French-built AMX30 tanks, and in October 1997, the United States delivered 116 refurbished 155mm field howitzers. As these arms flowed to federation forces, Western European diplomats and military leaders repeated their argument that Train and Equip was a "recipe for more war" and that "one day American-made tanks will be rolling across Bosnia's plains."[16]

MPRI moved to execute its contract as soon as it received U.S. Government approval. By any standards, it faced a tough task. MPRI personnel had to augment their technical competence with deft diplomacy. Initially, meetings were fraught with ethnic tension and occasional threats of violence. But over time, the animosity was replaced by bureaucratic struggles over offices and furniture. Eventually, with a great deal of MPRI coaching and after-hours socializing, bantering and joking between the two sides became common. MPRI also faced enormous technical hurdles. It had to set up quickly in an austere postconflict environment with a tight budget, and it had to integrate and maintain diverse used equipment donations, which arrived at different intervals.

Yet within seven months of hitting the ground, an integrated Federation Army School and Computer Simulation Center for both soldiers and officers opened, and brigade- and battalion-level training began in earnest. By the end of the program's second year, 5,000 soldiers had concluded unit training, and 2,500 had gone through the school and simulation center. MPRI also taught small unit tactics, conducted battle management training with U.S. computer systems at a combat simulation center near Sarajevo, and established live-fire tank and artillery training at ranges in western Bosnia and Turkey.

Political tension between Bosniaks and Croats was a constant challenge. Both factions were "suspicious of American commitment," wondering if the United States was "in this for the long haul."[17] During the first year, much effort went into forging a working relationship between the two previously warring groups. The Train and Equip Program had to tackle high-level political problems, including passing new legislation so there would be a legal basis for the new federation command structure and suppressing usage of old nationalist symbols such as flags, insignia, and automobile license plates.

In the midst of all this political maneuvering, Pardew considered one issue important enough to risk his entire program: the removal of the Bosniak Deputy Defense Minister Hasan Cengić. As a Muslim hardliner, Cengić was perceived as close to but ultimately out of step with the more moderate Izetbegović. His Iranian ties were well known, and in the postwar environment, removing radical Iranian fighters and persons of influence was a nonnegotiable, congressionally and Presidentially mandated prerequisite for the Train and Equip Program to begin. Pardew informed Izetbegović that keeping people such as Cengić around "was not a strategy for security" but a "road to isolation and partition."[18]

The situation came to a head as the United States prepared to deliver its first shipment of heavy weapons. Pardew insisted that a letter signed by Secretary of State Warren Christopher and Secretary of Defense William Perry be sent to Izetbegović demanding the removal of Cengić as Minister of Defense. State considered removing ministers in other governments extraordinary, inappropriate, and fraught with political risks. The idea went against State proclivities, and no immediate decision from Secretary Christopher was forthcoming. While waiting, Pardew learned one day that Secretary Perry was in the main State building for a ceremony. He buttonholed Perry and made his case. Perry took Pardew to Christopher, who was hesitant. However, with Secretary Perry's encouragement, he agreed and added his signature to the letter.

Pardew went to Sarajevo and delivered the ultimatum to Izetbegović. The insistence on Cengić's removal began a tense period of high political drama involving numerous senior leaders in the U.S., Bosnian, and Croatian governments. While Izetbegović considered the implications of the ultimatum, the Train and Equip Program was put on hold, which meant the large U.S. merchant ship carrying U.S. weapons idled in the Adriatic from October 24 on, burning fuel and program dollars. For the task force, wasting drawdown dollars in such a fashion was agonizing. As weeks passed, Pardew orchestrated support from U.S. leaders who, whenever they met with Izetbegović or those close to him, encouraged the Bosnians to sever ties with Cengić.

After considerable delay, Izetbegović agreed to let his longtime associate go on

the condition that Bosnian Croat Deputy Minister of Defense Vladimir Šoljić also be dismissed. Pardew was eventually able to secure the cooperation of the Croats on this condition, and Šoljić resigned on November 18. Several days later, the U.S. ship offloaded the American weapons at the Croatian port of Ploče. For the Train and Equip team, the firing of Cengić had been a high-stakes gamble, but one that paid off. It sent a signal to federation officials: no more games and no more playing both sides.

Meanwhile, many Western European officials continued to oppose Train and Equip. The British, whose opposition was apparent from the beginning, were by far the boldest and most adept. They considered the program akin to "pouring gasoline on a fire."[19] One British general in particular made a practice of harassing MPRI, disrupting meetings and undermining the program. British diplomatic personnel worked in lockstep with their military to prevent the Train and Equip Program from getting necessary permits and approvals. They were particularly successful in delaying combined live-fire training at the new Combat Training Center outside of Livno, which was located in the British-controlled sector of Bosnia. It took more than a year and a half to overcome British impediments before the center opened.

Net Assessment. It is not possible to enumerate all the administrative, technical, and political achievements of the Train and Equip task force here. The important point is that it achieved its larger goals, the most immediate of which was securing a military balance so the Bosnian Federation could defend itself. The program was supposed to provide a rough balance between the federation and the Republika Srpska. NATO forces would deter conflict among the larger regional powers. The point of the Train and Equip Program was local military stability in Bosnia, which reduced the demands on the program, and also meant the program was unlikely to precipitate a regional conflict because it was not a threat to Croatia or Serbia proper. The task force was highly successful in this respect and, realizing it, the Bosnian Serbs were never tempted to renew hostilities.

The Train and Equip Program also helped orient Bosnia toward the West. Narrowly construed, this meant expelling foreign forces and detaching the Bosniaks from their relationship with Iran, which largely succeeded. Pardew forced the dismissal of Cengić to accelerate the process of severing Bosniak ties with Islamic radicals. Hundreds of Iranian Revolutionary Guards and mujahideen forces were expelled from Bosnia. In later years, the Bosnian government continued to cooperate with the United States in identifying and expelling extremists. In October 2001, six Algerians were arrested by the Bosnian police and later sent to Guantánamo Bay. In 2007, the government revoked the citizenship of over 420 people connected to "foreign forces." Close observers have argued the United States largely succeeded in thwarting al Qaeda influence in Bosnia.

Broadly construed, orienting Bosnia toward the West meant imparting Western norms on civil-military relations and forging ties with Western leaders and institutions, which most would conclude is still a work in progress. Some participants in Train and Equip believed this happened, asserting the program proved the federation could integrate its militaries and professionalize them, which inclined military leaders to be more apolitical.[20] An International Crisis Group report in December 1997 supported this assessment, observing there was more evidence of cooperation in the federation Ministry of Defense than in other sectors, and that the program provided transparency for federation military developments. Because Train and Equip helped Westernize postwar Bosnia, the report concluded it "would be foolish to scrap this asset."[21]

Bosnia's future remains uncertain, but 20 years later, there is no doubt the program achieved its operational goals. In less than 2 years, the task force rectified the military imbalance between Bosnian Serb and federation forces, and did so with only about half of the resources originally estimated necessary. The program reassured the federation and eliminated any misconceptions the Serbs might have had about the merits of renewing hostilities. If federation leaders ever harbored illusions about renewing hostilities, they diminished as the program's limited scope and duration became clear to them. Both objectively, in terms of actual military capability, and subjectively, in terms of perceived relative capabilities, the program did not overshoot its mark as so many worried. On the contrary, it diminished the influence of extremists and foreign meddling in Bosnian politics and moved the political mainstream to favor greater integration.

The Way Forward

NATO's experience in Bosnia, including the Train and Equip experience, illustrates that hybrid threats to NATO are not new and that the Alliance has experience with successful mechanisms for managing them. Initially, NATO leaders hoped diplomacy alone would generate peace. Later, they hoped that positioning military forces around safe havens in Bosnia would suffice and, finally, that isolated airstrikes would do the job. But lurching from diplomacy to military force generated little progress. Resolving what one former Secretary of State called "the problem from hell" required a sophisticated and ongoing mix of diplomacy, military force, and other tools of statecraft.

Eventually, the United States put an interagency team together that could coordinate diplomatic, political, military, and informational activities quickly and to good effect. The first team was led by Holbrooke and the second by Pardew. Both pursued this integrated approach to great effect. Indeed, Pardew used a similar approach later to facilitate peace in Macedonia and Kosovo. Some NATO partners were slow to learn the necessity of a multidimensional response, but having ceded the lead to the United States, they had to follow the American approach to move forward, and it proved a success.

Russia is a much more capable and serious threat than Serbia but what the United States demonstrated in Bosnia, and what NATO must understand now, is that all hybrid threats require new command and control arrangements.

There is nothing wrong with the military steps NATO has taken to date to reassure Eastern European countries facing hybrid threats from Russia—for example, strengthening the Response Force and bolstering air policing and air surveillance in the Baltics. However, these military steps need to be integrated with informational, political, diplomatic, and economic measures. Russia will be much more easily deterred if it sees NATO can match its multifaceted aggression with multidimensional security measures that are well coordinated, mutually supporting, and quickly implemented.

Some will argue that what was achieved in the Balkans was more of a national effort than an Alliance success. It is true that some NATO countries resisted the multidimensional approach, but not all. In any case, the United States acted within the NATO framework, and NATO provided the peacekeeping forces. Other successful U.S.-sponsored cross-functional mission organizations such as Joint Interagency Task Force–South[22] operate on an international as well as an interagency basis, so NATO should be able to do the same.

Others will argue NATO is just a military organization. But NATO's founding treaty has political, economic, military, and organizational provisions, and a quick glimpse at the structure of NATO headquarters reveals diverse functional bodies of expertise. In the course of the Afghanistan campaign, NATO needed a better multidimensional approach and adapted its structures accordingly (for instance, by setting up the Comprehensive Crisis and Operations Management Centre at Supreme Headquarters Allied Powers Europe).[23] What NATO needs for tackling the hybrid challenge is to take this approach to the next level.

If NATO can learn from its own history, focus on the basics of hybrid warfare, and update its Strategic Concept document with a cross-functional mechanism for managing hybrid threats, then it will be able to counter hybrid threats much more effectively. NATO's senior political decisionmaking body, the North Atlantic Council, would have to work out its oversight procedures just as the U.S. National Security Council had to approve and periodically review the terms of reference for the teams led by Holbrooke and Pardew. Approving the mechanism and procedures would be a worthy objective for NATO's July 2016 Warsaw Summit. Certainly these steps would be more practical than more speeches on the importance of hybrid warfare or debates about the concept's definitional parameters. **JFQ**

Notes

[1] Frank G. Hoffman, "On Not-So-New Warfare: Political Warfare vs. Hybrid Threats," *WarontheRocks.com*, July 28, 2014, available at <http://warontherocks.com/2014/07/on-not-so-new-warfare-political-warfare-vs-hybrid-threats/>.

[2] Jens Stoltenberg, remarks at the World Economic Forum, January 22, 2016, in U.S. Department of Defense News Transcript, "Remarks by Secretary of Defense Ash Carter in Plenary Session at the World Economic Forum in Davos, Switzerland," January 22, 2016, available at <www.defense.gov/News/News-Transcripts/Transcript-View/Article/644253/remarks-by-secretary-of-defense-ash-carter-in-plenary-session-at-the-world-econ>.

[3] Ibid. These leaders have been making these same points over the past year. See Ashton Carter, "U.S., Germany, and NATO Are Moving Forward Together," speech, Atlantik Brücke, Berlin, Germany, June 22, 2015, available at <www.defense.gov/News/Speeches/Speech-View/Article/606684/remarks-at-atlantik-brcke-us-germany-nato-are-moving-forward-together>.

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[7] Compare, for example, Alexander Lanoszka, "Russian Hybrid Warfare and Extended Deterrence in Eastern Europe," *International Affairs* 92, no. 1 (January 2016); and Patrick Duggan, "Man, Computer and Special Warfare," *Small Wars Journal*, January 4, 2016.

[8] Richard Holbrooke, *To End a War* (New York: Random House, 1998), 61.

[9] Bill Clinton, "Remarks on the Balkan Peace Process and an Exchange with Reporters," Washington, DC, October 31, 1995.

[10] House Foreign Relations Committee, prepared statement of Secretary of Defense William Perry, *The Deployment of Troops to Bosnia*, November 30, 1995. Perry made the same point privately to President Izetbegović. Derek Chollet, *The Road to Dayton Accords: A Study of American Statecraft* (London: Palgrave/MacMillan, 2005), 169.

[11] David Halberstam in Chollet, 196.

[12] These and other attributes were repeatedly mentioned in discussions of the program and codified in the National Security Council (NSC) documents. See, for example, "Equipping and Training the Federation," tab C, September 29, 1995, Deputies Committee Meeting, Declassified Document C05961572, September 21, 1995, Bosnia, Intelligence, and the Clinton Presidency.

[13] Institute for Defense Analyses, "Assessment of Military Stabilization Options for Bosnia-Herzegovina," report summary, January 1996, 1. Also, NSC Memorandum, "Summary of Conclusions for meeting of the NSC Deputies Committee," Declassified Document C05962049, October 6, 1995, Bosnia, Intelligence, and the Clinton Presidency.

[14] Jim Pardew, U.S. Special Representative for Military Stabilization in the Balkans, personal journal (March 1996–February 1997), March 15, 1996.

[15] International Crisis Group, "A Peace, or Just a Ceasefire? The Military Equation in Post Dayton Bosnia," ICG Bosnia Project, December 15, 1997, 18.

[16] The *Washington Post*'s John Pomfret was transparent in arguing that he believed European officials were correct. See John Pomfret, "Waiting for the War Next Time," *Washington Post*, June 1, 1997, C2.

[17] Pardew journal (December 1995–March 1996), January 7, 1996.

[18] Pardew journal (March 1996–February 1997), June 14, 1996.

[19] As early as 1992, a Central Intelligence Agency assessment noted, the United Kingdom "appears to be the most leery among West Europeans of any military involvement in Bosnia." "European Views on the Use of Force in Bosnia and Herzegovina," declassified intelligence memorandum, DCI Interagency Balkan Task Force, August 10, 1992, available at <www.foia.cia.gov/collection/bosnia-intelligence-and-clinton-presidency?page=10>.

[20] Interview with General Dzemal Najetovic by author, September 14, 2010.

[21] International Crisis Group.

[22] Evan Munsing and Christopher J. Lamb, *Joint Interagency Task Force–South: The Best Known, Least Understood Interagency Success*, Strategic Perspectives 5 (Washington, DC: NDU Press, June 2011).

[23] We are indebted to Alexander Mattelaer for this insight.

Afghan police officers and Afghan National Security Forces move up mountain pass in Paktika Province, Afghanistan, January 2014 (DOD/Jared Gehmann)

Economic Development in Counterinsurgency

Building a Stable Second Pillar

By Patrick H. Donley

The future of U.S. participation in counterinsurgency (COIN) is uncertain, but not so the probability that future adversaries will avoid U.S. conventional military dominance by using asymmetric, unconventional methods. As COIN theorist David Kilcullen warns, "Any smart future enemy will likely sidestep our unprecedented superiority in traditional, force-on-force, state-on-state warfare. And so insurgency . . . will be our enemies' weapon of choice until we prove we can master it."[1] Unfortunately, because no two insurgencies are exactly alike, mastering COIN will be a perpetual endeavor.

At its core, a counterinsurgency is a battle for government legitimacy in the minds of its people.[2] Writing in 1963, David Galula summarized the insurgent aim: "If the insurgent manages to dissociate the population from the counterinsurgent, to control it physically, to get its active support, he will win the war because, in the final analysis, the exercise of political power depends on the tacit or explicit agreement of the population or, at worst, on its submissiveness."[3] One of the chief ways insurgents attain popular

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support is by capitalizing on government ineffectiveness. In fact, government illegitimacy is considered by many COIN strategists as the "root cause of and the central strategic problem in today's unstable global-security environment."[4] Counterinsurgents, then, must have as their primary objective the creation of a government that derives legitimacy from its ability to provide its population with effective security, responsive governance, and sufficient economic development.[5] In fact, Kilcullen considers the security, political, and economic mission elements to be co-equal "pillars" in his Inter-agency Counterinsurgency Framework.[6]

Due to the complexities of COIN, the U.S. Army and Marine Corps collaborated in 2006 to provide their forces with "a manual that provides principles and guidelines for counterinsurgency operations."[7] Recognizing "that every insurgency is contextual," the authors set out to highlight the "common characteristics of insurgencies" to provide military implementers of COIN "a solid foundation for understanding and addressing specific insurgencies."[8] Along with security, the manual concedes the criticality of governance and economic development to COIN success, and acknowledges that military members must work closely with "many intergovernmental, host-nation, and international agencies" to capitalize on skills such as "rebuilding infrastructure and basic services" and to facilitate the establishment of "local governance and rule of law."[9] Moreover, it advocates synchronizing these three mission elements and unifying "efforts of joint, interagency, multinational, and Host Nation (HN) forces toward a common purpose."[10]

While military forces have a legitimate role in each of the mission elements, their primary expertise lies in providing a secure environment so that political and economic development can occur. To this end, the chapter titled "Executing Counterinsurgency Operations" advocates using a "Clear-Hold-Build" approach for "specific, high-priority area[s] experiencing overt insurgent operations" in order to "create a secure physical and psychological environment; establish firm government control of the populace and area; and gain the populace's support."[11] Since publication of the military COIN guidance, many observers believe the strategy has been expanded to include a preliminary "Shape" phase (intelligence preparation of the battlefield, interagency planning, and so forth) and a concluding "Transfer" phase (bulk U.S. force withdrawal, primary responsibility shifts to HN security forces, and so forth).[12] Whether the military's "Shape, Clear, Hold, Build, and Transfer" model is correct, it provides a useful framework that political and economic development experts can use to integrate their actions with their security colleagues.

To date, political and economic developers have not created comparable models to guide their actions or inform their mission partners. Consequently, their efforts appear somewhat reactive and disjointed, and may, as a result, be perceived as being subordinate to the security mission. To address this weakness, this article focuses on the economic development mission. It proposes five key principles that should guide economic development activities in a counterinsurgency, and it presents a four-phase conceptual model that can be used by economic developers, as well as security and political planners, to better synchronize all COIN efforts. It does not, however, offer a context-independent recipe for COIN success or an easy-to-follow checklist that simplifies COIN complexities. No matter how efficiently a COIN campaign is run, success depends on a number of complicated factors, many of which are outside the economic developers' control. Most importantly, COIN success presupposes a capable HN government partner that is willing to make the changes necessary to win popular legitimacy. Secondly, it assumes that the United States wants to defeat the insurgency and not merely alleviate some lesser risk. Both of these are weighty assumptions that may, at some stage, prove inaccurate. While this article hopes to provide general guidance that will increase the probability of U.S. COIN success, it concedes the enormity of the COIN challenge upfront.

Economic Development Principles

Rather than propose a new definition for *economic development*, this article uses Kilcullen's description of the economic pillar in his Inter-agency Counterinsurgency Framework. Within the pillar, he includes "Humanitarian Assistance, Development Assistance, Resources & Infrastructure Management, and Growth Capacity" as key tasks.[13] Economic development, then, is the provision of sufficient basic services, infrastructure, and economic essentials to garner popular support and engender government legitimacy. Because "sufficient economic development" is largely based on the affected population's expectations, it is always contextually determined.

As a growing number of development experts have observed, economic development is not a panacea and cannot be divorced from security and governance. The government cannot gain sufficient legitimacy solely by building projects or otherwise infusing money into a local economy.[14] In fact, such development can actually increase instability rather than decrease it.[15] Andrew Wilder and Stuart Gordon conclude from their research in Afghanistan that U.S. and international aid efforts "show little evidence of . . . winning hearts and minds or promoting stability."[16] An Afghan tribal elder summed up the argument this way: "Lack of clinics, schools, and roads are not the problem. The main problem is we don't have a good government."[17]

This finding was echoed by a group of development experts who discussed the topic at the 2010 Wilton Park Conference "Winning 'Hearts and Minds' in Afghanistan: Assessing the Effectiveness of Development Aid in COIN Operations."[18] The end-of-conference report found that "many Afghans believe the main cause of insecurity to be their government, which is perceived to be massively corrupt, predatory and unjust. . . . Without getting the 'politics right' both military and aid efforts are unlikely to achieve their desired effects."[19]

In contrast to the U.S. Army's 2009 handbook *Commander's Guide to Money*

as a Weapons System, which claims that warfighters can use "money as a weapons system to win the hearts and minds of the indigenous population to facilitate defeating the insurgents," mounting evidence indicates that money (and economic development more broadly) is effective in COIN *only* if it bolsters government legitimacy.[20] Development can buy the population's goodwill temporarily, but it cannot do so indefinitely by itself.[21] While economic development efforts will depend on the nature of the insurgency and the specific context of the situation, U.S. economic development strategies for a counterinsurgency should broadly comply with five key principles.

Endgame Legitimacy. Economic development in COIN must have as its overriding purpose the creation of HN legitimacy. Every other aim must be subordinated to this objective. While the concept is easy to understand, it is often difficult to practice consistently and may increase local instability and opposition in the short term. It requires developers to bypass unethical local powerbrokers and shun corrupt business practices in favor of closely monitored, community-led development programs. Using this approach, developers may be opposed by economically powerful business people, corrupt government leaders, organized crime syndicates, and local warlords who seek to protect their power and influence, in addition to traditional insurgents. Nevertheless, to achieve the long-term goal of building HN government legitimacy, economic developers and policymakers must resist the urge to compromise overall mission success for short-term progress. This is far easier said than done.

One way of legitimizing the HN government is to work within the HN structure as much as possible. Rather than setting up parallel U.S. structures that delegitimize the HN government, U.S. developers should adapt to HN institutions if they exist. It is possible that the HN government has capabilities and institutions that are uniquely suited to the culture and the expectations of its populace.[22] By utilizing them and building upon their expertise, the United States increases mission effectiveness, bolsters HN capability, and lends credence to the government. If the HN structures are ineffective, U.S. developers should use their expertise and financial leverage to reform them since the HN will eventually inherit the long-term mission.[23] Reforming the government institutions can be problematic since affected HN officials may resist the changes and accuse the United States of neocolonial meddling—an accusation the United States is particularly keen on avoiding and one insurgents can exploit to discredit HN government legitimacy. Resolution of these conflicts will be difficult and will require diplomatic acumen, but the United States cannot simply acquiesce to HN intransigence if it hopes to be successful.

Similarly, economic development should utilize HN implementers as much as possible so that the HN gets the credit. While this development approach takes longer and may require more people to institute initially, it builds long-lasting HN capacity and engenders popular support for the government. Making this more difficult is the fact that U.S. economic developers are usually under pressure from an impatient U.S. public to generate results quickly. Consequently, developers are susceptible to two common development pitfalls. Either they are tempted to use whatever structures are already in place without regard for the negative effect such practices have on the local population, or they opt to do all the work themselves. Both of these approaches delegitimize the HN government and minimize the chances for long-term success.

Synchronicity of Missions. Economic development must be integrated and fully compatible with security and political strategies. As all three mission elements are necessary to generate the requisite legitimacy to defeat the insurgency, great care must be taken not to pursue one at the expense of the other two. This requires thorough inter-mission planning and an acknowledgment that each component affects the success of the others. To achieve this synergy, planners from all three mission sets, including representatives from the HN government, must work together to develop compatible plans. It may also require appointment of a single decisionmaker who exercises authority over all three missions.

Synchronization is also key to eliminating gaps between mission elements. The counterinsurgents' ability to eliminate gaps between missions can be the difference between success and failure. Each COIN mission assumes prominence at a different point in the campaign even though all three operate throughout the COIN effort.[24] Security is the foundational need for all others and therefore takes priority in the early stages of a COIN operation.[25] Development reaches its critical point after security has been established but is a precursor to and facilitator for effective subnational governance. Lastly, political mobilization is critical toward the end of the COIN effort because the HN government must be capable of exercising long-term effective governance before successful transfer of the mission can occur.

Economic development must be synchronized with the security mission so that there is no gap between the termination of kinetic operations in the security mission and the initiation of humanitarian assistance in the economic development mission. Immediately following the Clear phase of the security mission, the local population is likely to feel a degree of cautious optimism that the HN government can positively change their lives. While locals may not yet feel comfortable expressing support for the government, they are expectant and hopeful that their lives might improve. Simultaneously, the immediate post-kinetic period is when local populations are particularly vulnerable and dependent on the government to meet their needs due to injuries, infrastructure destruction, economic upheaval, and population displacement. If the necessary assistance lags behind the security operation or is inadequate in its scope, the people's hopes are dashed and their assessment of government legitimacy declines, possibly even below pre-security operation levels. This sense of betrayal gives the insurgent another leverage point with which to influence the population.

Children in boys and girls school in Kabul (U.S. Air Force/Stacey Haga)

Moreover, the longer it takes the counterinsurgent to follow the security gains with economic development, the less able the security forces are to maintain the secure environment. Effective economic and political development activities build confidence among populations, resulting in the growth of an internal security dynamic. Without this internal security, it is virtually impossible to maintain any security at all, regardless of the number of people at their disposal. Insurgents will eventually infiltrate back into the community and exact vengeance upon those who collaborated with the government. The resultant insecurity will further highlight the government's ineptness and create lasting doubt in the minds of the people that will be difficult to eradicate.

Similarly, there should be no gap between effective economic development and the establishment of good governance. To achieve the intended COIN effect, the local population must associate the economic development with effective HN governance, which can only be accomplished if the political mission is functional and effective while economic development is taking place. Simply put, people are more likely to respond favorably to governance when they associate it with meeting their needs.

Simultaneous Tactical and Operational Development. Economic development must be employed simultaneously at tactical and operational levels. Along these lines, the Wilton Park conferees made a distinction between "stabilization" and "development objectives" of economic aid. Stabilization funds were those used for "relatively small scale and short-term projects designed to promote stability effects at a tactical level" and development funds were for "larger-scale and longer-term development aid projects designed to promote development objectives."[26] Whether the distinction is between stabilization and development or between tactical development and operational development, economic development has the potential to generate crucial effects at both levels. Effective economic development will strive to take advantage of both domains to bolster government capability and generate popular support.

At the tactical level, economic development provides the counterinsurgent with a tool to incentivize the population to resolve factors of instability and bolsters local support for the HN government. Pragmatically, it also buys the counterinsurgent limited goodwill and forms the basis for trust from the local population. Effective economic development must take advantage of this window of optimism and provide tangible benefits that cannot easily be countered by insurgent information operations.[27] Early on, tactical economic development comes in the form of emergency provisions and humanitarian assistance such as medical care, food and water, and temporary shelters. Because of the kinetic nature of the

Afghan presidential candidates Abdullah Abdullah and Ashraf Ghani sign Joint Declaration of the Electoral Teams in Kabul, August 2014 (State Department)

environment, implementers at this stage will primarily be military personnel.

Once immediate needs are met, tactical economic development progresses to the provision of necessary economic infrastructure (for example, wells, roads, electrical generators), resolving communal instability, and laying the framework for sustainable development institutions. Tactical economic development should not be a blank check designed to meet every individual desire within a community; instead, it should be an incentive to motivate community members to work together to identify and solve local problems. In this latter stage, economic developers provide populations with training in basic economic development principles and organizational expertise and assist them in the acquisition of necessary infrastructure development in accordance with the community's priorities. Ultimately, the latter stage of tactical economic development should build the community's capacity to take control of its economic future and set the stage for the political pillar to operate effectively.

Operational economic development, on the other hand, is aimed at increasing the HN government's legitimacy by bolstering its ability to provide economically for the entire country. What tactical developers do inside and among local communities, operational developers do on a national scale—using development to resolve disputes, increase employment opportunities, and provide skills training. U.S. economic developers at this level serve as advisors to key development ministries, facilitate U.S. access to key HN leaders, and act as the conduit for HN-U.S. meetings. Moreover, they should assist the HN government in identifying and sourcing large infrastructure projects that will have a positive national impact, training government personnel to implement and oversee these projects, and increasing HN capability to use international aid effectively. Vitally important to generating confidence within the HN population and the international community is the creation of transparent procedures for financial accountability.

Host-Nation Capacity-Building. Economic development must deliberately build HN government capacity so that the government is eventually able to conduct the mission without U.S. assistance. From planning to implementation to sustainment, U.S. developers must prioritize "transferability" by using methods the HN government can perpetuate. The goal of U.S. developers should be to transfer the mission seamlessly to their HN partners so that the population experiences no difference in the quality of service it receives. To this end, the United States must avoid using equipment or software that the HN can neither operate nor sustain. This constraint can be challenging for U.S. developers, who often rely on the latest technological

and mechanical tools. They must either change their way of doing business to be compatible with HN capabilities, or they must invest in the HN's long-term infrastructure development and commit to its sustainment and maintenance until the HN is able to sustain it on its own.

Because of the lead-time required to train HN personnel and the need to avoid gaps between the mission sets, the United States must begin capacity-building at the tactical and operational levels long before the need for implementation. Once there is agreement between the U.S. and HN governments regarding the manner in which economic development will occur (in the early planning phase), the United States should prioritize the capacity-building mission at the operational and tactical levels. Early on, U.S. personnel may out of necessity lead development efforts, but they must not do so indefinitely—particularly at the tactical level. The United States must deliberately taper its involvement until it is an unseen entity providing advice, technical expertise, and funding.

For the tactical mission, the United States must strive to transfer implementation responsibilities to the HN as soon as possible. To facilitate this, the United States must ensure the HN has a rapidly deployable development capability that can quickly reach all parts of the country. Recognizing that some countries cannot afford to support permanently based local HN developers in every part of the country, the United States should train deployable HN Development Teams (HNDTs) to meet this need. These teams should comprise people who work for various HN development ministries or departments and who have the requisite skills and knowledge to mobilize post-kinetic populations, manage expectations, assess immediate needs, and distribute essential life-sustaining necessities in conjunction with applicable government departments. In addition to meeting immediate needs, these HNDTs should be trained to identify sources of instability within populations so that development resources can be used to resolve them. The U.S. Agency for International Development (USAID) already employs a stabilization framework designed to highlight sources of instability, but to be truly effective, USAID needs to partner more comprehensively and consistently with trained HN personnel to administer it.[28]

Not only would HNDTs bring cultural expertise and a shared cultural identity to complex situations, but they would also represent the HN government in a way that foreigners never could.[29] Additionally, because of their knowledge of the HN government, they would be better able to coordinate the people's perceived needs with the long-term plans of the government. For instance, if a particular community desired the construction of a new school, members of an HNDT would be better placed to liaise with the appropriate government department to ensure the proposed school aligns with HN government plans and resources. Too often, foreign economic developers, hoping to engender goodwill with a population, build infrastructure projects in the wrong locations or to the wrong specifications because they do not coordinate their actions with the HN government.[30] Instead of fostering HN government legitimacy, the abandoned project becomes a testimony to the HN government's inability to meet the population's needs.

Responsiveness to Local Input. Finally, economic development must respond to local demand. When seeking to bring economic development to a community, U.S. developers have a tendency to assume they know best what the community needs and what will most quickly resolve instability and engender legitimacy. To simplify logistical and financial planning and avoid conflict among local communities over aid equity, it is tempting for U.S. developers to eschew input from the local populace.[31] While these concerns may be valid, they do not justify ignoring local input entirely. After all, the point of economic development is to create HN government legitimacy in the minds of its people, which requires government responsiveness to the perceived needs of the people. There are reasonable limits to the flexibility that can be allowed in the system, but some portion of the development budget must allow for popular input into the decisionmaking process.[32]

A compromise approach would be to give each community a per capita amount of money for spending on a community-selected project, in addition to other centrally selected development packages. The community project could then be used as a skills-development opportunity in which development experts mentor community leaders through every phase of project implementation. A similar approach is already used effectively by Afghanistan's Ministry of Rural Rehabilitation and Development with its National Solidarity Program.[33] Time and again, this community empowerment and rural development program is lauded by researchers and inspectors alike for its high accountability, broad popular support, and national reach.[34]

Regardless of the details of the economic development strategy that is implemented, U.S. developers would do well to incorporate these five economic development principles, even if it means the pace of development is slower, the selection of projects is suboptimal, or the credit for the efforts goes elsewhere. Above all, the United States should remember that if economic development is delinked from HN legitimacy, it is a fruitless exercise and a potential contributor to instability.

Economic Development Model

Utilizing the five economic development principles above, it is possible to construct an economic development model for COIN operations to guide future planning efforts. The model is composed of four phases: Shape, Stabilize, Build, and Transfer (figure 1). While three of the phases share the same names as their security model counterparts, they do not necessarily share the same timelines. Figure 2 illustrates the correlation between the security and economic development models.

Phase 0: Shape. This phase is primarily for planning and preparation. For the COIN effort to be successful, representatives from all three mission elements must participate equally in building a

Figure 1. Economic Development Mission Element

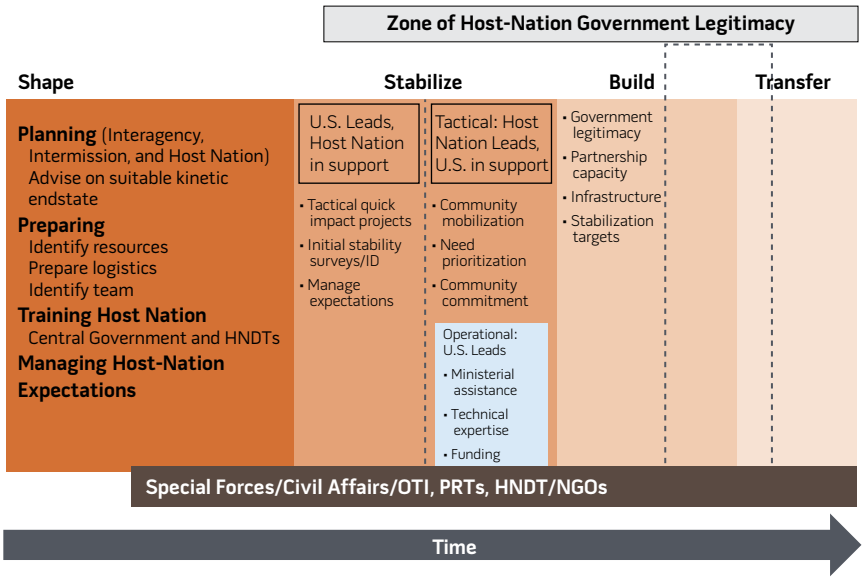
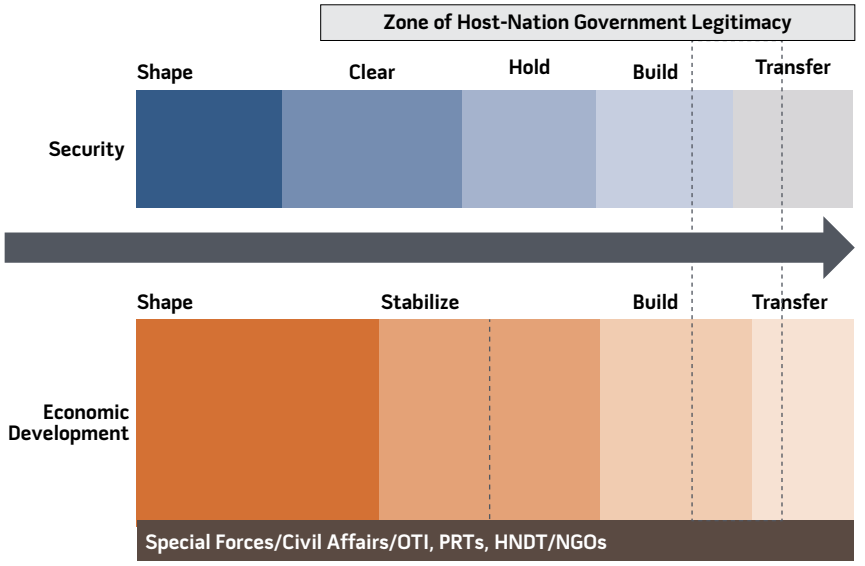


Figure 2. Security and Economic Development Comparison



macro-level COIN plan. Because one mission element's needs may drive the actions of the other two, it is critical that planning for all three mission elements be integrated from the beginning. For example, if successful economic development in a particular area requires uninterrupted electrical power, economic development planners should convey this requirement to the security planners so that they conduct their operation accordingly. Special emphasis should be placed on planning transition points between one mission element and another to ensure there is no gap in momentum or service to the population. Each mission element should share special considerations regarding timing, location, measures of success, and follow-on actions. At the micro-level of economic development planning, military, interagency, and HN personnel should actively participate, even if it slows the process.

In addition to planning, the Shape phase is devoted to identification and acquisition of necessary resources. To prevent a security development gap from occurring, the financial mechanisms, personnel, and key equipment must be ready in advance. Moreover, economic developers should identify, train, equip, and exercise HN Development Team members. Because of the questionable security environments and austere locations in which they will operate, HNDT members should possess a wide variety of skills. If development skills are lacking, the United States should consider initiating educational programs for host nationals in return for their obligatory government service. This "development college" would not only benefit the individuals and the HN government in the short term, but it would also broaden the foundation for longer term economic success as the graduates apply their skills after completing their service obligations.

Phase 1: Stabilize. This phase is divided into two stages. The first stage begins while the security mission is still conducting clearing operations. Because kinetic operations are ongoing, the military leads this phase, primarily using special operations forces and civil affairs teams who have been trained in economic development tasks. As the environment becomes more secure, economic development responsibilities shift to civilian experts from USAID's Office of Transition Initiatives and joint civil-military Provincial Reconstruction Teams (PRTs). Economic development in this early stage focuses on providing advice to U.S. military combatants on how best to terminate their operations to facilitate economic development success, assessing humanitarian damage for planning refinements, and providing emergency humanitarian assistance. As the security effort transitions from Clear to Hold, HN economic developers play a greater support role, helping U.S. PRTs conduct initial needs assessments and stability surveys with returning internally displaced populations. They also work together to initiate small-scale projects designed to build on the population's optimism, all the while actively managing the population's expectations.

Security force team member for PRT Farah maintains security and checks communications during meeting with Farah Provincial Chief Justice in Farah City, Afghanistan (U.S. Navy/Josh Ives)

The second stage of this phase occurs when security has become fairly constant and the environment is relatively safe for civilian workers. The HNDTs lead this effort at the tactical level with the PRTs providing support when necessary. Because U.S. presence can be a destabilizing force within some communities, PRTs should limit their involvement to providing advice and access to U.S. development funding for projects, as needed. HNDTs should concentrate on conducting stability surveys, mobilizing the population to prioritize the community's needs in a systematic way, and providing the community members with necessary training for follow-on infrastructure projects.

At the operational level, U.S. development experts work within key HN government development ministries. They advise the HN government departments, train civil servants, and act as liaisons between the U.S. chain of command and the HN government, as well as between the tactical development teams and central government. In addition, they advise the government on strategic messaging and help it navigate the complicated financial rules of U.S. funding. Just as tactical developers seek to gain the trust of the people at the community level, operational developers seek to gain the trust of HN government officials.

Phase 2: Build. This phase begins as the environment becomes more consistently secure and trust develops between the HNDTs and populace. At the tactical level, HNDTs continue to collect stability data, but their emphasis transitions to resolving the sources of instability using the previously collected and analyzed information. During this phase, HNDTs utilize the construction of new infrastructure projects as a vehicle for mentoring communities through the development process by training, advising, and monitoring the community's efforts. HNDTs also begin to interact more frequently with experts from the political mission element in anticipation of the upcoming political thrust. Throughout this phase, PRTs continue to distance themselves from the day-to-day mission, and PRT expertise either moves from the tactical level to the operational, or prepares to move to the next community.

At the operational level, U.S. developers concentrate almost exclusively on building long-term capability. They emphasize their role as advisors rather than implementers and seek to transform tactical successes into broader government legitimacy by helping the government with its information operations. Former PRT members with unique development skills (for example, civil engineers, agricultural specialists) move from the tactical level to the relevant operational ministries, further increasing HN government capacity. At some point in this phase, the HN government should attain sufficient legitimacy and capability to act with minimal U.S. technical assistance.

Phase 3: Transfer. This phase must be an overall COIN decision, not just an

economic development decision. It is the least complicated phase to explain but potentially the most difficult to complete. U.S. COIN planners, in conjunction with the HN government, should agree upon a timetable and criteria for an area's readiness, as well as long-term U.S. commitments regarding advisors and financial resources.

Conclusion

In his 1963 book on COIN, David Galula conceded that some insurgencies simply could not be defeated, regardless of the COIN methods employed.[35] This article may have created an impression that an economic development strategy that employs the four-phase model and the five principles of government legitimacy, mission synchronicity, simultaneous tactical and operational development, HN capacity-building, and responsiveness to local input is guaranteed to bring success. Unfortunately, it is not so. As Carl von Clausewitz warned years ago, wars are fought against living opponents with strategies and counterstrategies of their own, and they are fought in the context of complex factors that exist outside the counterinsurgent's control.[36] This is especially true when supporting another state's counterinsurgency effort. The one truth U.S. COIN planners must keep in mind is that no amount of external U.S. assistance, modern firepower, development expertise, or sound political advice can save a country from eventual defeat if the HN refuses to govern legitimately. Consequently, the United States should invest more effort into evaluating the HN government, as well as the criticality of long-term U.S. objectives, before agreeing to augment another government's COIN campaign.[37]

Nevertheless, when counterinsurgency operations on behalf of another government are required, planners must concentrate on building the HN's capacity and legitimacy. COIN expertise and development projects do not matter if they fail to enable the HN to provide for the needs of its population and govern legitimately. Therefore, the United States should focus its efforts at the operational level as soon as possible. Developers must quickly extricate themselves from the tactical mission or else risk encouraging an unhealthy dependence within the HN government and a "recipient mentality" within the local population. Only when the HN government is required to meet the public's needs will it be able to demonstrate the capability and persistence required to earn the trust of the population. The development model presented here is not guaranteed to generate COIN success, but utilizing the principles contained within it increases the probability that development can be an effective tool toward that end. JFQ

Notes

[1] David J. Kilcullen, "Three Pillars of Counterinsurgency," remarks at the U.S. Government Counterinsurgency Conference, Washington, DC, September 28, 2006, available at <www.au.af.mil/au/awc/awcgate/uscoin/3pillars_of_counterinsurgency.pdf>.

[2] While many people have discussed government legitimacy as the key to counterinsurgency (COIN) success, Conrad Crane's "COIN of the Realm? The Role and Importance of Legitimacy in Counterinsurgency," a presentation at the Future Defense Dilemma Seminar of the 21st Century Initiative and the Strategic Studies Institute, April 2, 2008, was an excellent discussion on the topic.

[3] David Galula, *Counterinsurgency Warfare: Theory and Practice* (Westport, CT: Praeger Security International, 2006), 4.

[4] Eliot Cohen et al., "Principles, Imperatives, and Paradoxes of Counterinsurgency," *Military Review*, March–April 2006, 49.

[5] Authors differ in the terms they use for the building blocks of government legitimacy, but nearly all use terms that fall within these three general categories. Cohen et al., 49, cites "a culturally acceptable level or rate of political, economic, and social development" as one of their five key indicators of legitimacy. Galula discusses security, political, social, and economic measures as key enablers of popular support throughout his work; for instance, see Galula, 52, 54–55, 62–63, 84. Former Secretary of Defense Robert Gates defined *counterinsurgency tasks* as follows: "One of the most important lessons of the wars in Iraq and Afghanistan is that military success is not sufficient to win: economic development, institution-building and the rule of law, promoting internal reconciliation, good governance, providing basic services to the people. . . . these, along with security, are essential ingredients for long-term success." See Robert M. Gates, Landon Lecture, Kansas State University, November 26, 2007, available at <www.k-state.edu/media/newsreleases/landonlect/gatestext1107.html>.

[6] Kilcullen, 4–6.

[7] U.S. Army Field Manual (FM) 3-24 and Marine Corps Warfighting Publication (MCWP) 3-33.5, *Counterinsurgency* (Washington, DC: Headquarters Department of the Army and Headquarters U.S. Marine Corps, December 15, 2006), foreword, available at <http://usacac.army.mil/cac2/Repository/Materials/COIN-FM3-24.pdf>.

[8] Ibid.

[9] Ibid.

[10] Ibid., para. 5-7, page 5-3.

[11] Ibid., 5-18.

[12] Anthony Cordesman points out the following regarding U.S. COIN strategy: "The British have used the phrase: 'Shape, clear, hold, and build'; while senior U.S. NSC [National Security Council] officials have used the term 'Clear, hold, build, and transfer.' None of these terms have yet been defined in detail, or in the form of clear operational plans and goals, and they would have to be implemented in different mixes and phases in virtually every major region and population center in Afghanistan." Anthony Cordesman, *"Shape, Clear, Hold, Build, and Transfer": The Full Metrics of the Afghan War* (Washington, DC: Center for Strategic and International Studies, February 18, 2010), slide 117. See also C. Christine Fair, "Obama's New 'Af-Pak' Strategy: Can 'Clear, Hold, Build, Transfer' Work?" *Asian Affairs: An American Review* 37 (2010), 115, available at <http://home.comcast.net/~christine_fair/pubs/ClearHoldBuild_Fair.pdf>.

[13] Kilcullen, 4.

[14] See, for example, Paul Fishstein and Andrew Wilder, *Winning Hearts and Minds? Examining the Relationship Between Aid and Security in Afghanistan* (Medford, MA: Feinstein International Center, January 2012), 67–71, available at <http://fic.tufts.edu/assets/WinningHearts-Final.pdf>; Andrew Wilder and Stuart Gordon, "Money Can't Buy America Love," *Foreign Policy*, December 1, 2009, available at <www.foreignpolicy.com/articles/2009/12/01/money_cant_buy_america_love>; David Kilcullen, Greg Mills, and Jonathan Oppenheimer, "Quiet Professionals: The Art of Post-Conflict Economic Recovery and Reconstruction," *RUSI Journal* 156, no. 4 (August–September 2011), 101. See also Eli Berman, Jacob N. Shapiro, and Joseph H. Felter, "Can Hearts and Minds Be Bought? The Economics of Counterinsurgency in Iraq," *Journal of Political Economy* 119, no. 4 (August 2011), 766–819, available at <www.jstor.org/stable/10.1086/661983>.

[15] Fishstein and Wilder, 41–50; Kilcullen, Mills, and Oppenheimer, 102.

[16] Wilder and Gordon; Fishstein and Wilder, 67–68.

[17] Wilder and Gordon.

[18] "Winning 'Hearts and Minds' in Afghanistan: Assessing the Effectiveness of Development Aid in COIN Operations," Wilton Park Conference Report (WP1022), March 11–14, 2010, 2, available at <www.wiltonpark.org.uk/wp-content/uploads/wp1022-report.pdf>.

[19] Ibid., 2.

[20] *Commander's Guide to Money as a Weapons System: Tactics, Techniques, and Procedures*, Handbook No. 09-27 (Fort Leavenworth, KS: Center for Army Lessons Learned, April 2009); Fishstein and Wilder, 59; Wilton Park Conference Report, 3.

[21] According to the Wilton Park Conference Report, "Researchers and practitioners described ways in which aid had been used effectively to legitimise interactions between international forces and local communities (i.e., 'to get a foot in the door'), which had proven useful in terms of developing relationships, and gathering atmospherics and intelligence. But these were relatively short-term transactional relationships, and there was little evidence of more strategic level effects of populations being won over to the government as a result of development aid," 2.

[22] Trevor Hublin, U.S. Agency for International Development (USAID) field worker, interview by author, February 4, 2012; Mohammed Ehsan Zia, former Afghan Minister of Rural Rehabilitation and Development, interview by author, January 30, 2012.

[23] Daniel Weggeland, "Civil Partnering: Enabling Afghan Civil Government Assumption of Risk and Responsibility," Special Report for the International Security Assistance Force Commander, Counterinsurgency Advisory and Assistance Team, Kabul, August 2011, 3.

[24] This is a general rule of thumb and an oversimplification. It is not meant to suggest that the COIN effort will progress in a smooth, unidirectional fashion from start to finish or that mission elements have only one period of primary emphasis. There are times when unforeseen complexities will force the counterinsurgent to return to a previous phase or spike the influence of a particular mission element outside the normal period so as to deal with a particular contingency.

[25] According to Cohen et al., "The cornerstone of any COIN effort is security for the populace. Without security, no permanent reforms can be implemented, and disorder will spread," 50. Similarly, Galula stated, "Political, social, economic, and other reforms, however much they ought to be wanted and popular, are inoperative when offered while the insurgent still controls the population," 55.

[26] Ibid., 4.

[27] General David Petraeus made the following observation, "[T]he liberating force must *act quickly, because every Army of liberation has a half-life* beyond which it turns into an Army of occupation. The length of this half-life is tied to the perceptions of the populace about the impact of the liberating force's activities. From the moment a force enters a country, its leaders must keep this in mind, striving to meet the expectations of the liberated in what becomes a race against the clock." David H. Petraeus, "Learning Counterinsurgency: Observations from Soldiering in Iraq," *Military Review*, January–February 2006, 3, emphasis in original.

[28] Hublin, interview. In Afghanistan, USAID is seeking to implement the District Stability Framework and its successor program, Stability in Key Areas, an approach that trains and utilizes host-nation personnel to collect data on sources of instability. See USAID, Office of Military Affairs, "District Stability Framework: Social Science Underpinnings of Complex Operations, MORS Mini-Symposium," PowerPoint Presentation, October 18–21, 2010, George Mason University. According to an unpublished report from Hublin, the Tactical Conflict Assessment and Planning Framework was administered effectively by Afghanistan's Ministry of Rural Rehabilitation and Development Rapid Deployment Teams. In his report, Hublin stated, "[Local] citizenry openness in passing information to the [Afghan] Stabilization Team throughout the week was the single most important factor contributing to its success." Trevor Hublin, "Stabilizing Rural Areas of Afghanistan: A Proposed Model for National and Provincial Partnership with the Ministry of Rural Rehabilitation and Development, Farah Province Case Study," October–November 2009, unpublished report, 9.

[29] Ronald E. Neumann, "The Hole in the Whole of Government Needs Leadership and Learning Organizations," unpublished paper, 5.

[30] "Nowhere to Turn: The Failure to Protect Civilians in Afghanistan," Joint Briefing Paper by 29 Aid Organizations Working in Afghanistan for the NATO Heads of Government Summit, Lisbon, November 19–20, 2010, 19, available at <www.oxfam.org/sites/www.oxfam.org/files/bn-nowhere-to-turn-afghanistan-191110-en.pdf>; Michael Young, "Development at Gunpoint? Why Civilians Must Reclaim Stabilization Aid," *Foreign Affairs*, December 19, 2010, available at <www.foreignaffairs.com/articles/67052/michael-young/development-at-gunpoint?page=show>; Fishstein and Wilder, 48.

[31] Wilton Park Conference Report, 15.

[32] Hublin, interview; Zia, interview; Fishstein and Wilder, 46–47.

[33] According to the National Solidarity Programme's (NSP's) Weekly Status Report from December 3–9, 2011, the program has mobilized 28,745 communities, presided over the election and training of over 28,521 Community Development Councils, and funded 47,721 community-selected subprojects worth over $964,000,000 since its inception in 2002. Moreover, the approach increases popular ownership over a project and builds long-term partnership capacity at the tactical level. Marwa Mitra, NSP, email to author, January 29, 2012, "National Solidarity Programme Weekly Status Report," Kabul, Afghanistan, January 21–27, 2012. Especially impressive is the fact that the NSP has achieved these results when the maximum dollar amount for any village is $60,000. The NSP is not designed as a rapidly deployable program but a deliberately planned program that takes 2 years from initiation to project completion. A modified version of this program that can immediately respond to post-kinetic situations could create the conditions for longer term development and stability.

[34] Among others, see Hamish Nixon, *Subnational State Building in Afghanistan*, Afghanistan Research and Evaluation Unit Synthesis Paper Series, April 2008, 38; Friedrich W. Affolter et al., "Transformative Learning and Mind-Change in Rural Afghanistan," *Development in Practice* 19, no. 3 (May 2009), 326; Office of the Special Inspector General for Afghanistan Reconstruction (SIGAR), *Afghanistan's National Solidarity Program has Reached Thousands of Afghan Communities, but Faces Challenges that Could Limit Outcomes*, SIGAR Audit-11-8 Economic and Social Development/NSP (Washington, DC: SIGAR, March 22, 2011), ii; Gregory Warner, "The Schools the Taliban Won't Torch," *Washington Monthly*, December 2007, available at <www.washingtonmonthly.com/features/2007/0712.warner.html>; John A. Nagl, Andrew M. Exum, and Ahmed A. Humayun, *A Pathway to Success in Afghanistan: The National Solidarity Program* (Washington, DC: Center for a New American Security, March 2009); Andrew Wilder, "Losing Hearts and Minds in Afghanistan," Middle East Institute, April 20, 2012, available at <www.mei.edu/content/losing-hearts-and-minds-afghanistan>; Paul Fitzgerald et al., *Introduction to Afghanistan, 1979–2009: In the Grip of Conflict* (Washington, DC: Middle East Institute, 2009), 143–146, available at <www.isn.ethz.ch/isn/Digital-Library/Publications/Detail/?ots777=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&lng=en&id=110391>.

[35] At the end of his book, Galula concedes the following: "Is it always possible to defeat an insurgency? This work, through a common intellectual accident, may have given the impression that the answer is a strong affirmative. . . . Obviously, it is not always possible to defeat an insurgency," 96.

[36] Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), 75–78, 85–86, 89.

[37] For an interesting discussion on the topic of partnership evaluation, see Michael C. Veneri, "The Partner Predicament: U.S. Building Partnership Capacity, the War on Terrorism and What the U.S. Cannot Overlook," *Synesis* 2 (2011), available at <www.synesisjournal.com/vol2_g/2011_2_G7-17_Veneri.pdf>.

Airman connects AIM-9 Sidewinder to guidance control section unit test set at Misawa Air Base, Japan, July 2013 (U.S. Air Force/Kia Atkins)

Defense Entrepreneurship

How to Build Institutions for Innovation Inside the Military

By James Hasik

Fears of slipping dominance are driving an American push for military innovation. But while the accomplishments of American industry are enviable, not all innovation is grounded in technology or flows from the private sector. The U.S. Armed Forces have a considerable history with internally driven innovation, and today a new class of innovators is emerging within the Services. These public entrepreneurs watch for opportunities, make decisions under uncertainty, and then meld the factors of change in sticky (that is, locally commercialized) ways. Their entrepreneurship sometimes falters, as the controlling tendencies and vested interests of the bureaucratic apparatus resist. Defense entrepreneurs must overcome greater barriers than those faced by private entrepreneurs, but policymakers could speed their progress by building the right organizational models in staffing, structures, and incentives.

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Understanding the Internal Innovation Imperative

Is the dominance of the U.S. military at risk? A host of democratized tools of destruction are spreading fear that hitherto regional actors and superempowered individuals will break the American monopoly on some of the grandest instruments of military force.[1] In response, then–U.S. Secretary of Defense Chuck Hagel in November 2014 launched a formal "Defense Innovation Initiative" aimed at reshaping research and development (R&D) with a "Third Offset Strategy," focused on robotics, miniaturization, and additive manufacturing.[2] In these fields in particular, officials and analysts have been exhorting industry to innovate, "save innovation," and practice "innovation warfare."[3]

But while the largest defense contractors would always like more government funding, they are only now increasing their heretofore scant spending on internal R&D.[4] Unless the defense industry creates "more compelling threats of potential lost business," these firms will be unlikely to boost their own investments.[5] At the same time, large-scale innovation may become more difficult as a result of the increasing accumulation of knowledge, such that each dollar spent on defense does not deliver as much technological advancement as in the past.[6] If this happens, the price of dominance will become prohibitive. The technological gap between the United States and its near-peer competitors will continue to narrow, exposing America's vulnerabilities.[7]

In other ways, however, the rate of recombinant technological change is outpacing the bureaucratic processes of defense planning and acquisition.[8] Firms that do not normally conduct business with defense ministries may be outpacing the record of innovation by traditional contractors in fields such as microsatellites, cyber defense, robotics, and networked communications.[9] These advances then cause their own problems, as offset strategies built on commercial technologies raise relatively fewer barriers to entry to those up-and-coming powers.[10] Where others can access common technologies, creating advantage requires melding people, products, and processes in novel but sticky ways.[11]

Highlighting Examples of Internal Success

Before overhauling the supply base, reaching for unobtainable advantages, and building a new innovation-industrial complex, however, the defense industry should consider leveraging internal resources. Some of the best new ideas have come from within the Armed Forces, and from the relative bottom of the hierarchy.[12] Examples abound, reaching back decades. Consider how the initial impetus for employing assault helicopters in combat came from a group of junior aviators in the Marine Corps in the late 1940s.[13] The still-vaunted Sidewinder heat-seeking missile began as a part-time project by a small team of government engineers at Naval Air Weapons Station China Lake in California.[14] More recently, the initial prototypes of the now ubiquitous Joint Direct Attack Munition (JDAM) were similarly developed at Eglin Air Force Base in Florida.[15]

Thus, as Deputy Secretary of Defense Robert Work notes, the first requirement of this new offset strategy is to foster more innovative people.[16] Fortunately, among the middle ranks, a group of innovators is again emerging, this time connected by social media and driven by a sense that change is necessary. They are tackling the middle-level problems resident in questions of organization, training, doctrine, and even weapons engineering.[17] "Following in the wake of military innovators and reformers past, like William Sims and John Boyd, they have begun to organize," forming associations like the now decade-old *Small Wars Journal*, the Center for International Maritime Security, and the Defense Entrepreneurs Forum.[18] Simply put, they are today's defense entrepreneurs.

Perhaps most prominent is the Defense Entrepreneurs Forum. Now in its third year, the forum benefits from combining external sponsorship (primarily by the U.S. Naval Institute and University of Chicago) with a selected membership of substantially junior- and middle-ranking officers. Their work so far features some compelling ideas.[19] David Blair, an Air Force gunship and unmanned aerial vehicle (UAV) pilot fresh from a Ph.D. at Georgetown, wants to harness the big data of black boxes to continuously train better pilots. He calls the idea *Moneyjet*, but he also wants to keep the data from the micromanagement of higher headquarters.[20] Mark Jacobsen, an Air Force transport pilot now at Stanford University, is building cargo UAVs for humanitarian relief inside air defense umbrellas.[21] Matthew Hipple, a Navy helicopter pilot, is conceiving a force of networked decoy UAVs to "confuse, distract, and seduce" enemies.[22] Think of it as a combination of the Ghost Army of World War II and the helicopter decoy tactics of the Falklands War—or maybe even "smart chaff."[23]

Defining Defense Entrepreneurship

When creativity like this is unleashed, impressive forces can be raised. But just creating the demand for any program can be hard institutional work. In the classic telling, "manager and entrepreneur" U.S. Navy Rear Admiral Wayne Meyer, the legendary father of the Aegis air defense system, had a task as broad as the head of any startup business. Meyer had to "organize his staff, prepare designs for contractors, develop a working relationship with his sponsor in OPNAV [the headquarters staff], make sure Aegis ships met fleet needs, and keep Aegis afloat in Congress."[24] Meyer matched private industrial initiative to public service to bring about a revolution in air defense.

This idea of a *public* entrepreneur originates with the noted economist Joseph Schumpeter in the 1940s, but was brought to fuller understanding by Robert Dahl in the 1960s.[25] While precisely defining the nature of entrepreneurship can be challenging, describing what entrepreneurs *do* is easier.[26] For over a century, military innovation has been a collaborative enterprise and an emergent process among government, the military, and industry.[27] The entrepreneurs have been innovators in all three fields and have functioned as organizational agents of change. As Peter Klein and others have summarized, the management literature characterizes their functions in three ways.[28]

First, entrepreneurs *watch for opportunities*.[29] They will find "gaps between actual and potential outcomes or performance, and look for resources to close" them.[30] Incentives for action vary in source and intensity. On the battlefield, the military champion of change may view innovation as a matter of survival. In the laboratory or factory, contractors view opportunities as serving customers and earning profits. At headquarters, motivations may stem from a sense of obligation, the opportunity for advancement, or merely the prospect of retaining a job. The motivations may be duller than in commercial enterprises and languishing under the "trained incapacity"

Captain Frank Futcher explains display of 3D-printed objects during Navy Warfare Development Command–sponsored innovation workshop at Old Dominion University in Norfolk, Virginia (U.S. Navy/Jonathan E. Donnelly)

of bureaucracy.[31] Because these motivations exist, however, they can be leveraged in emergencies.

Second, entrepreneurs readily *make judgments under uncertainty* about where to invest money and effort.[32] In this formulation, uncertainty is not risk that can be modeled with probabilities, but is at best a known unknown. Uncertainty about reflexive bureaucratic hostility to discontinuous breakthroughs can deter those investments to an extent that simple risk does not. So entrepreneurs inform their judgment by probing and learning, preferably in ways that are inexpensive and, in retrospect, almost obvious.[33]

Third, entrepreneurs know how to *meld the factors of change in sticky ways.*[34] Engineers create new products and processes, but entrepreneurs bring about the change in people and teams as well. Indeed, the institutions themselves eventually become as outdated as the obsolete technology supporting them. At that point, both organizational and technological changes are required. One of the "spillovers of private actions to the public domain" is then the "establishment of [new] social norms and values," which drives better behavior by less enterprising elements of the bureaucracy.[35]

Explaining How Entrepreneurship Falters

The trouble is that the incentives for this internally driven change do not always align. Consider the tale of Major Robert Seifert, USAF (Ret.), an AC-130 gunship pilot whose experiences over Iraq led him to conclude that the aircraft could support both the battalions of the line and special operators. Two commanding officers tried to suppress his brief and higher headquarters attempted to classify it before *Joint Force Quarterly* published him.[36] Why does this happen?

Perhaps foremost, the bureaucratically minded dislike risk and detest uncertainty. As Max Weber put it, "bureaucratic administration means fundamentally the exercise of control on the basis of knowledge."[37] Without clear knowledge to point to, informal authority can wane. This limitation can induce *controlling tendencies* with which officials attempt to define and rationalize what they can.

Opportunity is not everyone's preference. Those with *vested interests* hold back reform through a lingering focus on existing technologies and comfortable

WARNER, a teaming of Worcester Polytechnic Institute and Carnegie Mellon University, navigates debris field during DARPA Robotics Challenge in Pomona, California, June 2015 (U.S. Navy/John F. Williams)

operating concepts.[38] Sometimes the process will be unconscious; the laggards will be trapped by their adherence to old paradigms. At other times, however, the rear guard actions will be quite deliberate. One of the more salient, if anonymous, quotes from the Vietnam experience features a senior officer who insisted, "I'll be damned if I permit the United States Army, its institutions, its doctrine, and its traditions to be destroyed just to win this lousy war."[39]

Finally, *public* entrepreneurs "are constrained by the need . . . to avoid excessive novelty."[40] Combining liberal democracy with a bureaucratic state apparatus naturally tends to restrain opportunities for bold leadership, simply to guard against "a dismantling of formal institutional checks and balances."[41] Appearing to move quickly stimulates the governmental *antibodies of change*, slowing the possible rate of innovation. Here again, where revolutionary change is required by abrupt changes in technology or the correlation of forces, failure to innovate is not an option.

Building Institutions for Innovation

Whether Seifert's idea was the best for supporting troops, it probably deserved a better airing. This is where the sponsors of entrepreneurs must undertake the fourth function—to *work to overcome the barriers to innovation*. As some private entrepreneurs entering the public realm have painfully realized, the challenges can be both impressive and confounding. The recent story of venture capitalist Jim Hake, who founded a 30-person private foundation to seek donations for military hearts-and-minds activities, did not start well—intervention by then–Secretary of Defense Leon Panetta was eventually required.[42] But public and private entrepreneurship remain interdependent, and effective defense entrepreneurship will require the co-evolution of an active public enterprise system with that of a more vigorous private defense industry.[43] The quality of the institutional arrangements supporting public entrepreneurship "is crucial for democratic capitalism" generally, and for the efficient supply of the Armed Forces specifically.[44]

Large organizations vary widely in their ability to innovate, and the Department of Defense should not be satisfied with its innovative capacity. So

what can Pentagon policymakers do? Encouraging entrepreneurship in defense is not just about funding the occasional technical breakthrough from small business or madly throwing money at possibilities.[45] Recent research at Bain & Company, a global management consulting firm, suggests that better innovative performance flows from an *organizational culture* that nurtures new products and processes.[46] When strategies "bubble up and accrete from below . . . the initiatives advanced by the operating levels of the organization are determined by the *staffing*, *structural*, and *incentive* decisions" made by top management.[47]

Staffing is perhaps the most challenging problem. In defining innovation as "the profitable application of creativity," Darrell Rigby, Kara Gruver, and James Allen of Bain & Company stress the importance of the differing skill sets for creation and commercialization. Citing examples such as Steve Jobs and Tim Cook at Apple, and Bill Bowman and Phil Knight at Nike, they note that great teams are built from both.[48] Military organizations, however, tend to breed more of the latter than the former. This approach must be revised, however, because melding that enduring change requires the inclusion of multiple kinds of people in the organization.

Command structures must become honest brokers for innovation. Senior leaders must choose the right pace of change and know when to kill off bad ideas.[49] Thinking *inside* the box sometimes leads to more usable ideas.[50] This must not be allowed to justify the protection of vested interests, but discipline is needed to foster what Scott D. Anthony, David Duncan, and Pontus Siren of the growth strategy firm Innosight call a *minimum viable innovation system*, defined as the "important intermediate option between *ad hoc* innovation and building an elaborate, large-scale innovation factory." This can be aimed to produce what serial entrepreneurs sometimes call the *minimum viable product*, that combination of proverbial "pipe-cleaners and cardboard" for working out the concept that forms the starting point for functional prototyping and early fielding.[51] Honestly vetting these ideas up the chain of command is not a natural process for most of the Armed Forces.

To make that happen, innovation needs incentives. Fostering entrepreneurship is not just about finding the smartest and most motivated entrepreneurs; it requires crafting the right rules of the game for those entrepreneurs to succeed. Leaders of the Armed Forces and the defense agencies, as well as those within the Office of the Secretary of Defense, ought to be asking themselves whether their organizations are rewarding, protecting, and *promoting* the 21st-century Williams Sims, Pete Quesadas, Hyman Rickovers, Brute Krulaks, Frank Aults, and John Boyds.[52] Review boards need to care more about pushing envelopes than peccadillos. As long as leadership is not actively pushing out the innovators, the cause is not lost, for not every potential *public* entrepreneur "is going to want to make a fortune by age 30 in a social media start-up." If personnel systems can offer opportunities for those with the creative itch to exit, make that fortune, and then serve again, the cause is not lost. The Department of Defense and the defense industry that supports it must compete with the better opportunities to build personal wealth that are offered in the public entrepreneurial space, but they often do provide more compelling technical and operational challenges than those found in writing messaging apps.[53] JFQ

Notes

[1] James Hasik and Mark Revor, *Democratized Destruction: Global Security in the Hacker Era* (Washington, DC: The Atlantic Council, September 2014).

[2] Chuck Hagel, "A New Era for the Defense Department," *Defense One*, November 18, 2014; Zachary Fryer-Biggs, "DOD Reshapes R&D, Betting on Future Technology," *Defense News*, April 20, 2014.

[3] See Marcus Wesigerber, "Hagel to Challenge Defense Industry to Innovate," *Defense News*, September 3, 2014; Aaron Mehta, "At AFA, USAF Secretary Calls for Innovation," *Defense News*, September 13, 2013; Sydney J. Freedberg, Jr., "How DOD Is Trying To Save Innovation," *Breaking Defense*, October 28, 2014; and Adam J. Harrison, "Innovation Warfare: Technology Domain Awareness and America's Military Edge," *War on the Rocks*, October 28, 2014; Doug Cameron and Julian E. Barnes, "Pentagon Presses Contractors to Innovate," *Wall Street Journal*, November 20, 2014.

[4] See, for example, Zachary Fryer-Biggs, "Northrop CEO: Low DOD R&D Spending Puts U.S. Tech Superiority at Risk," *Defense News*, September 16, 2013.

[5] Byron Callan of Capital Alpha Partners, quoted in Marcus Weisgerber, "Defense Firms Could Be Skeptical of Investing in Research," *Defense One*, November 26, 2014. That said, at least one top manager is concerned. See Paul McLeary, "CEO: Focus on Short-Term Dividends Could Blind Defense Industry to Long-Term Viability," *Defense News*, December 11, 2014.

[6] Benjamin F. Jones, "The Burden of Knowledge and the 'Death of the Renaissance Man': Is Innovation Getting Harder?" *Review of Economic Studies* 76, no. 1 (January 2009), 283–317.

[7] Jon Hamilton and Eric Williams, *USMC Strategic Initiatives Group Scouting Report*, October 24, 2014.

[8] Ibid.

[9] Secretary Chuck Hagel made a particular point of this in his speech. See also Paul McLeary, "DOD, Industry Huddle as Civil Firms Gain," *Defense News*, November 1, 2014.

[10] Loren Thompson, "Pre-Mortem: Hagel Innovation Initiative Is Too Little, and Way Too Late," *Forbes*, November 18, 2014; James Hasik and Alex Ward, "Third Offset Strategy, Second Adversary," *Defense Industrialist*, November 18, 2014; Sydney J. Freedberg, Jr., "Adversaries Will Copy 'Offset Strategy' Quickly: Bob Work," *Breaking Defense*, September 19, 2014.

[11] James Hasik and Byron Callan, *Disrupt or Be Disrupted: How Governments Can Develop Decisive Military Technologies* (Washington, DC: The Atlantic Council, May 2014).

[12] Adam Grissom, "The Future of Military Innovation Studies," *Journal of Strategic Studies* 29, no. 5 (October 2006), 905–934.

[13] B.J. Armstrong, "The Nuclear Option: Military Organizations, Leadership, and the Entrepreneurial Spirit," *War on the Rocks*, November 29, 2014; "The Answer to the Amphibious Prayer: Helicopters, the Marine Corps, and Defense Innovation," *War on the Rocks*, December 17, 2014.

[14] Ron Westrum, *Sidewinder: Creative Missile Development at China Lake* (Annapolis, MD: Naval Institute Press, 2013).

[15] James Hasik, *Arms and Innovation: Entrepreneurship and Alliances in the Twenty-First-Century Defense Industry* (Chicago: University of Chicago Press, 2008), chapter 4; Michael R. Rip and James Hasik, *The Precision Revolution: GPS and the Future of Warfighting* (Annapolis, MD: Naval Institute Press, 2002), 236.

[16] Remarks at the Defense One Summit, Washington DC, November 19, 2014.

[17] For the historical record of this phenom-

enon in the 1940s, see Paul Kennedy, *Engineers of Victory: The Problem Solvers Who Turned the Tide in the Second World War* (New York: Random House, 2013).

[18] B.J. Armstrong, "More Than an Offset: Defense Innovation from the Inside," *War on the Rocks*, November 26, 2014.

[19] For details on each proposal, see the *White Board: The Defense Entrepreneurs Forum*, available at <http://defenseentrepreneurs.org/whiteboard/>.

[20] The term is a clear allusion to Michael Lewis's *Moneyball: The Art of Winning an Unfair Game* (New York: Norton, 2003).

[21] For the autobiography, see Gail S. Halvorsen, *The Berlin Candy Bomber* (Bountiful, UT: Horizon Publishers, 2002).

[22] For more details, see Matthew Hipple, "Bring on the Countermeasures Drones," U.S. Naval Institute *Proceedings* 140, no. 2 (February 2014); and "Securing the Swarm: New Dogs, Old Tricks," *Small Wars Journal*, August 7, 2012.

[23] Megan Garger, "Ghost Army: The Inflatable Tanks That Fooled Hitler," *The Atlantic*, May 22, 2013. Additional comments were helpfully supplied by retired naval aviator Dan Moore and Atlantic Council Senior Fellow August Cole.

[24] Thomas C. Hone, Douglas V. Smith, and Roger C. Easton, Jr., "Aegis: Evolutionary or Revolutionary Technology?" in *The Politics of Naval Innovation*, ed. Bradd C. Hayes and Douglas V. Smith (Newport: U.S. Naval War College, 1994), 57.

[25] Adam D. Sheingate, "Political Entrepreneurship, Institutional Change, and American Economic Development," *Studies in American Political Development* 17, no. 2 (October 2003), 187, citing Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper, 1942); and Robert Dahl, *Who Governs? Democracy and Power in an American City* (New Haven: Yale University Press, 1961).

[26] Peter Klein, "Confusing Definitions of Entrepreneurship," *Organization & Markets*, March 30, 2011.

[27] For the historical roots of this process, see Katherine C. Epstein, *Torpedo: Inventing the Military-Industrial Complex in the United States and Great Britain* (Cambridge: Harvard University Press, 2014).

[28] Peter G. Klein et al., "Toward a Theory of Public Entrepreneurship," *European Management Journal* 7 (2010), 2.

[29] Israel M. Kirzner, *Competition and Entrepreneurship* (Chicago: University of Chicago Press, 1973).

[30] Klein et al., 3

[31] Robert K. Merton, *Social Theory and Social Structure* (New York: Simon & Schuster, 1968), 251–252, citing Kenneth Burke, *Permanence and Change* (New York: New Republic, 1935), 50 ff. The phrase appears to have originated with Thorstein Veblen. See Erin Wais, "Trained Incapacity: Thorstein Veblen and Kenneth Burke," *K.B. Journal* 2, no. 1 (Fall 2005).

[32] Frank Knight, *Risk, Uncertainty, and Profit* (Boston: Houghton Mifflin, 1921).

[33] Gary S. Lynn, Joseph G. Morone, and Albert S. Paulson, "Marketing and Discontinuous Innovation: The Probe and Learn Process," *California Management Review* 38, no. 3 (Spring 1996), 8–37.

[34] Joseph A. Schumpeter, *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle* (Cambridge: Harvard University Press, 1934).

[35] Klein et al., 4.

[36] Robert J. Seifert, "A Pilot Speaks: The USAF Is Harder on Internal Ideas Than It Is on Evil Insurgents," *Foreign Policy*, December 4, 2014. For the backstory, see Seifert, "Iraq and the AC-130: Gunships Unleashed," *Joint Force Quarterly* 45 (2nd Quarter 2007), 78–83.

[37] Max Weber, *The Theory of Social and Economic Organization*, trans. A.M. Henderson and Talcott Parsons (New York: Free Press, 1947), 339.

[38] J.P. Eggers and Sarah Kaplan, "Cognition and Renewal: Comparing CEO and Organizational Effects on Incumbent Adaptation to Technical Change," *Organizational Science* 20, no. 2 (March–April 2009), 461–477.

[39] Brian Michael Jenkins, *The Unchangeable War*, RM-6278-1-ARPA (Santa Monica, CA: RAND, 1972), 3.

[40] Klein et al., 7.

[41] Jan Schnellenbach, "Public Entrepreneurship and the Economics of Reform," *Journal of Institutional Economics* 3, no. 2 (August 2007), 183.

[42] Daniel Henninger, "How a Venture Capitalist Went to War," *Wall Street Journal*, November 28, 2014.

[43] Klein et al., citing Elinor Ostrom, *Governing the Commons: The Evolution of Institutional Forms of Collective Action* (Cambridge: Cambridge University Press, 1990); and Elinor Ostrom, *Unlocking Public Entrepreneurship and Public Economies* (Helsinki: United Nations e-government Development Index, 2005).

[44] Klein et al., citing Douglas C. North, *Institutions, Institutional Change, and Economic Performance* (Cambridge: Cambridge University Press, 1990); and Sheingate.

[45] Steven Davidoff Solomon, "Throwing Money at Start-Ups in Frenzy to Find the Next Uber," *New York Times Dealbook*, December 16, 2014.

[46] Eric Almquist et al., "Cracking the Code of Innovation," *Forbes*, August 2013.

[47] Sydney Finkelstein, Donald C. Hambrick, and Alberta A. Cannella, Jr., *Strategic Leadership: Theory and Research on Executives, Top Management Teams, and Boards* (Oxford: Oxford University Press, 2009), 6, citing Joseph L. Bauer, *Managing the Resource Allocation Process* (Oxford: Harvard Business School Press, 1970); Robert A. Burgelman, "A Process Model of Internal Corporate Venturing in the Diversified Major Firm," *Administrative Science Quarterly* 28, no. 3 (September 1983), 223–244. Emphasis added.

[48] Darrell K. Rigby, Kara Gruver, and James Allen, "Innovation in Turbulent Times," *Harvard Business Review*, June 2009.

[49] Adam Bluestein, "Debunking the Myth of Innovation," *Inc.*, September 2013.

[50] Drew Boyd and Jacob Goldenberg, *Inside the Box: A Proven System of Creativity for Breakthrough Results* (New York: Simon & Schuster, 2013). For a summary by the authors, see "Think Inside the Box," *Wall Street Journal*, June 14, 2013.

[51] Scott A. Anthony, David S. Duncan, and Pontus M.A. Siren, "Build an Innovation Engine in 90 Days," *Harvard Business Review*, December 2014, 62; comments by Dan Moore at the 2014 Defense Entrepreneurs Forum.

[52] Dan Moore, personal communication with author, November 1, 2014.

[53] Byron Callan, "DII Should Help Reshape Defense Industry and Relative Position of Contractors," Capital Alpha Partners, December 3, 2014.

Air Force F-16A Fighting Falcon, F-15C Eagle, and F-15E Strike Eagle fighter aircraft fly over burning oil field sites in Kuwait during Operation *Desert Storm* (U.S. Air Force)

If We Fight Joint, Shouldn't Our History Reflect That?

By David F. Winkler

American forces are fighting joint as never before in conjunction with the armed forces of allied nations. Joint and combined operations in Afghanistan and Iraq and current operations over Iraq and Syria have demonstrated conclusively that the Goldwater-Nichols Department of Defense Reorganization Act of 1986 came at the right time and has subsequently produced impressive results.

Yet because its historical assets remain in a pre-1986 Service-centric paradigm, the Department of Defense (DOD) has denied itself valuable historical analyses of the many joint and combined operations that have occurred since the landmark legislation. We are failing to effectively "collect, chronicle, and connect." These three words, once used by now-retired Admiral Edmund P. Giambastiani, Jr., to describe what the Navy expects from its history, could be extended to the joint and combined level.[1]

DOD faces tremendous challenges in the collection realm, given the increasing sophistication of digital command and control systems and data storage. While this article touches on that, it focuses its argument on the idea that realignment is needed to correct a void in its historical chronicling and connecting process.

Stovepiped History

To illustrate the problem, there are no unclassified DOD-produced historical monographs from the first Gulf War that cover the big picture. Instead, each Service published works documenting the missions and accomplishments of the forces they provided. The U.S. Army Center of Military History publications include *The Whirlwind War:*

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The United States Army and Operations Desert Shield *and* Desert Storm and *Jayhawk! The VII Corps in the Persian Gulf War*.[2] The Air Force History Support Office publications include *On Target: Organizing and Executing the Strategic Air Campaign Against Iraq*.[3] Representing the Naval Historical Center's contribution to this genre is *Shield and Sword: The United States Navy and the Persian Gulf War*. The Marine Corps History Division has several monographs in print.[4]

These publications are well written and do not ignore joint and combined operations. *Shield and Sword*, for instance, argues that the Navy needed to be better integrated at the joint command level, citing naval air's difficulty in receiving air tasking orders. But Service biases can be clearly discerned from such works as the Air Force's *Decisive Force: Strategic Bombing in the Gulf War*, which posited that the Gulf War–demonstrated airpower could bring down an enemy's military and economic infrastructure with few civilian casualties and minimal application of ground forces.[5]

While it could be argued that a span of 4 years may not have allowed Goldwater-Nichols an opportunity to trickle down within the DOD historical community at the time of the Gulf War, that excuse holds little water nearly three decades later. Again, the Service history offices strove to chronicle their branch's story in the global war on terrorism.[6]

Then there is the problem of connecting. Historians tend to focus on researching, writing, and getting their products to press. Marketing is someone else's job. To their credit, the Services have Web sites that list their publications and are posting some of these works online. However, most hard-copy products are distributed to limited internal audiences. Useful studies conducted by one Service history office are not being taken advantage of by other Services, government agencies, and outside institutions.

As for collecting, the picture is somewhat brighter due to the efforts of the Joint History Office (JHO). In 1993, recognizing the inadequacies of joint history coverage during the Gulf War, the Director of Joint History formed a Joint Operational History Branch within JHO to assure historical coverage for joint task forces created for contingency operations. To do this, the branch liaised with the history office of the combatant command charged with conducting a contingency operation to determine requirements. Each combatant command has a history office, which usually consists of one or two historians and a clerical assistant.

To meet contingency operation history gathering requirements, the JHO requested Reservists from the combat documentation assets of the four Service history organizations.[7] With the sometimes reluctant cooperation of those organizations, JHO deployed joint documentation teams to cover operations in Somalia, Guantánamo Bay, Rwanda, Haiti, and the Balkans, and in recent years to capture the history of operations in Iraq and Afghanistan.

Putting joint combat documentation teams in the field addresses only the collection part of the mission. The recipients of the electronic data, oral interviews, and other materials received from these joint combat documentation teams are the historians and archivists of the combatant command history offices. Having a responsibility to produce "accurate, thorough, and objective historical accounts of their commands, including all significant contingency and joint operations conducted by their respective commands," these individuals have to cull through this mountain of material to extract the information needed to chronicle recent operations.[8] The first step is establishing a chronology of events. This task alone is daunting, given the increasing complexity of combat operations.

Some of this work is being conducted at the JHO level. For example, Frank N. Schubert's *Other Than War: The American Military Experience and Operations in the Post–Cold War Decade* (2013) brings clarity to a list of nearly 300 military deployments from 1989 to 2001.[9] Are the combatant command offices, however, properly resourced to produce the operational historical analyses for their respective commands? The consensus points to a negative response.

The Special Operations Example

This conclusion factors in the experiences of the U.S. Special Operations Command (USSOCOM) history office. Working with a small permanent staff, this office keeps pace through the use of Reservists and contract employees. These trained individuals convert materials collected from the field into operational studies that are fed into the USSOCOM hierarchy. In many cases, the Reservists chronicling recent actions are the same ones who were deployed to the field to gather the raw materials. Because of the initiative of the USSOCOM historian and the willingness of his superiors to fund Reservists from the four Services to produce some of the best narrative analyses that will never be read by the general public, USSOCOM is receiving products that are integral for the training and planning of future missions.[10]

Unfortunately, the USSOCOM experience is atypical. Unlike the special operations community, where officers rotate in and out of related assignments and appreciate the need for a robust history program, officers assigned to other joint staffs usually have 2- to 3-year tours and then rotate back to their respective Services. Involvement with their combatant command history offices during their joint assignment yields little bang during their tours. Thus, due to benign neglect, combatant command history offices are understaffed and often not attuned to the commanders they support.

Instead, DOD depends on each of the Service history offices to collect and chronicle its operational combat history. But since the combatant commands are joint, and the Services are fighting jointly, why are the Service history offices still in the business of collecting material for, producing, and distributing operational histories? Is this a call to abolish the Service history offices? Hardly. Producing operational history is only a fraction of the valuable work these organizations perform for their respective Services. Each branch still recruits, trains, equips, administers, and provides the forces that the combatant commanders draw on to perform the mission of defending

National Museum of the Marine Corps, located in Triangle, Virginia, next to Marine Corps Base Quantico, is center for all Marine Corps history (U.S. Marine Corps)

the Nation. These processes have to be documented and chronicled. In addition, each Service has a rich heritage and lore that must be preserved and promoted as a means of instilling institutional identity.

But a realignment of how DOD employs its historical assets to support the chronicling and connecting of its operational history at the joint level should be considered. An obvious answer is ramping up the current 2- to 3-person shops at the combatant commands to much larger offices to include dedicated Reservist combat documentation collection support, additional historian and archival personnel to chronicle command events, and individuals to oversee the distribution of materials. However, bolstering the history offices of the combatant commands is only part of a more efficient solution. The USSOCOM history office experience is instructive, as that command hires help only when it is needed.

Oh, Canada!

For a complete solution, it is useful to examine how another country tackled the problem. In Canada, the Directorate of History and Heritage was created in 1996 by combining the National Defence History Directorate and the Directorate of Military Traditions and Heritage. What emerged from this amalgamation were five sections that addressed various aspects of history and heritage. Most germane to the focus of this narrative is the History and Archives Section, which gathers, preserves, and imposes intellectual control over the historical record (including unit annual historical reports and unit operational records), carries out historical research and provides historical support on demand, and publishes official, commemorative, and popular histories to meet the goals of the Department of National Defence. In addition to capturing the narrative history, this section manages the Canadian Forces combat art program. Other sections manage uniforms and ceremonial matters; the museums, military heritage, and traditions; and the nation's military bands.[11]

It is interesting to note that minus the musical component, the Canadian sectional alignments are quite similar to the direction the U.S. Navy took with its Naval History and Heritage Command, which comprises a History and Archives Division, a Collections Management Division, a Museum Systems Operations Division, and a Communications and Outreach Division. If the United States were to apply the Canadian/U.S. Navy model across DOD, the outcome would be a large Defense History and Heritage Agency (DHHA). The DHHA would take on the operational history collection, chronicling, and connection mission. Such an agency could not only take charge of the overall collection and chronicling efforts, but also take command of all DOD historical resource management efforts. The current JHO and Office of the Secretary of Defense (OSD) Historical Office could come under this new agency's auspices.

As with other Service mergers leading to the creation of other defense agencies, initial consolidation efforts would be painful and costly. However, longer term efficiencies could be realized through standardization of collection and archival practices, the creation of joint storage and preservation facilities, and the discontinuation of nonessential and overlapping functions.

While it could be entertaining to conceptualize the creation of a DHHA, however, there are words of caution: *Be careful what you ask for.* In addressing the challenge of producing operational histories from a joint perspective, the

DHHA solution is akin to hitting a tack with a sledgehammer. As the Canadian Forces found out when they had all of their personnel don the same uniform, there are benefits to having distinctions of Service identity. Just as it is impossible, for example, to envision the U.S. Marine Band ("The President's Own") reporting to a Director of Defense History and Heritage, it is hard to see how any of the Services would want to part with their Service heritage and museum establishments—especially when considering the size of each of the American Services matches that of the whole Canadian Forces and then some.[12] A criticism of the Canadian model is that the individual service components have been shortchanged within the whole historical narrative. Because the U.S. Service history organization historians focus on their respective Army, Marine Corps, Navy, Air Force, and Coast Guard narratives with all the Service-specific weapons systems, command and control structures, and customs, they produce quality Service-specific work. For these Service historians, there is a learning curve, and the quality of work they produce often becomes apparent in comparison to projects contracted out to PhDs with little military experience.

A Public Affairs Template

Rather than dismantle the current DOD history infrastructure and build anew around a DHHA, a more practical proposal would be to create an activity that aims to coordinate and synthesize collection, chronicle, and connection functions. Instead of creating yet another huge bureaucratic agency, it is proposed that a Defense History Activity (DHA) be stood up—ideally at Fort Lesley J. McNair in Washington, DC, to be collocated with the U.S. Army Center of Military History and the National Defense University's National War College. DOD executed a similar concept with the creation of a Defense Media Activity (DMA) in 2008.

An outgrowth of the Base Realignment and Closure study that occurred in 2005, DMA consolidated various Service media functions into one activity headquartered at a Fort Meade, Maryland, facility that opened in 2011. While each of the Services retains its well-established public affairs organizations, DMA performs functions that not only enhance Service-specific outreach capabilities but also improve the overall DOD information dissemination capability.

U.S. Army Africa staff apply lessons of World War II to current mission by visiting places of Army legend in Tunisia such as Kasserine Pass, Longstop Hill, and El Guettar (U.S. Army/Rick Scavetta)

DMA has organized itself into seven operating components. Its two most well-known components—the American Forces Radio and Television Service and *Stars and Stripes*—continue to operate from their respective offices in California and in Washington, DC, Germany, and Japan. Other Fort Meade–based components include the Defense Information School; a defense visual information component that manages the Joint Combat Camera program; a production component that provides services such as the Pentagon Channel, Joint Hometown News Services, and support for the various Service Web sites; a technical services component that hosts hundreds of DOD Web sites including the OSD Historical Office Web site; and a support services component that manages the activities' administrative and logistical needs.[13]

Future History

DMA could most definitely serve as a template for a DHA. The first component worthy of emulation is the creation of a schoolhouse. A Defense History School could offer courses to military personnel assigned to combat documentation duties such as those assigned to Army Military History Detachments and the Navy's Combat Documentation Detachment. Such a course would help to standardize collection methodologies and build camaraderie across Services. Other courses provide initial profession development to newly hired civil service/contractor historians, archaeologists, librarians, curators, and information management specialists to broaden the understanding of available resources and methodologies and, most importantly, to build professional relationships that will benefit DOD in the long term. A Washington, DC–based orientation program could offer students visits to the local Service history offices as well as tours of the Navy, Marine Corps, and eventually, Army museums.

The Defense History School could also manage an internship program expanding on an initiative by the OSD Historical Office to bring in students from respected graduate programs, obtain needed clearances, and obtain experience on producing historical products. By collocating DHA with

Curtiss A-1 Triad seaplane built in 1911 on display at Naval Air Station North Island as amphibious assault ship USS *Peleliu* (LHA 5) transits San Diego Bay (U.S. Navy/Troy Wilcox)

the National War College, the Defense History School could co-host symposia such as the "Air War in Vietnam" conference in October 2015 that was co-sponsored by the Air Force, Navy, and Army Historical Foundations, and the Marine Corps Heritage Foundation.

Another section of DHA could serve as a clearinghouse for historical products—both classified and unclassified—produced by the Service history organizations, combatant command history offices, and affiliated academic organizations such as the war colleges. While the classified publications and studies should be shared and posted on a classified network, unclassified products could be offered for purchase to the general public through a Defense History Bookstore. More than just a clearinghouse, this section could provide some comparative analyses of the different products through a comprehensive review program that aims to push relevant materials to proper audiences. Finally, in partnership with National Defense University Press, this section could provide a publishing option for different DOD history entities. Other DHA coordination/facilitation functions on behalf of DOD might include:

- The creation of an Operations Section to assure material is collected, properly archived, and turned into narrative. This section would coordinate with combatant command history offices to assure they are adequately resourced to document and chronicle current operations. As part of its mission, this section could liaise with institutions within and outside of DOD to include war colleges, academic institutions, other agency historical offices, and even historical offices of allied nations.
- The creation of a Defense History Bookstore would require the creation of an Information Management Branch and could develop the mother of all joint history Web sites that could host or link to classified chronologies, narratives, selected situation reports, after action reports, and summaries and transcripts of interviews with individuals serving in theater. The site could also serve as a repository for end-of-tour interviews conducted by the various Services and combatant command history offices. By offering access to operational history through one Web site, DHA would make a valuable contribution in connecting with the forces in the field.
- Finally, the DHA should coordinate with the DMA to have a strong public affairs and marketing function. Staffed by individuals with journalism and marketing skills, this function could have an important collection and dissemination role. Regarding collection, this branch should be on the distribution list to receive press releases from all operational commands within DOD. While not often detailed, these press

releases often provide the who, what, when, and where vital to writing good narrative.[14] In addition, this branch could coordinate with the various news bureaus to collect news reports from reporters in the field covering various conflicts. For source material gathering to chronicle operational history, the media serve as a force multiplier.

Having a robust combat documentation collection and operational history production capability ensconced within a DHA would yield several benefits:

- First and foremost, the Reservists who conduct combat documentation and the historians responsible for writing operational history would be gathering material for an organization that could make immediate use of it and provide content of value to all Services.
- An operational history organization at DHA would encourage joint training within the Reserve combat documentation units and facilitate joint projects involving historians from the component commands.
- Combatant commands could draw on DHA to receive joint combat documentation support and historians, as needed, to augment operational narrative writing efforts.
- Having an understanding of operational history sources, the DHA director would be ideally positioned to reach out to academia to encourage civilian scholars to write on operational topics.

This last point is critical. Closer contacts would encourage feedback that would enable DOD historians to produce products that better meet the needs of the targeted audience. Of course in this context, the targeted audience is the uniformed men and women at the combatant commands who are burdened with making critical decisions regarding the use and employment of American military forces.

History is often considered an afterthought by military leaders until the day after they retire. That mindset must be changed. We owe it to the men and women—and their leaders—who are currently fighting for their country to capture their story in a way that will be most beneficial to future generations. **JFQ**

Notes

[1] Edmund P. Giambastiani, Jr., speech at the 75th anniversary of the Naval Historical Foundation, March 15, 2001.

[2] Frank N. Schubert and Theresa L. Kraus, eds., *The Whirlwind War: The United States Army and Operations* Desert Shield *and* Desert Storm (Washington, DC: U.S. Government Printing Office [GPO], 1995); Stephen A. Bourque, *Jayhawk! The VII Corps in the Persian Gulf War* (Washington, DC: GPO, 2002). Three other recent Center of Military History books on operations in Southwest Asia touch on the Gulf War.

[3] Richard G. Davis, *On Target: Organizing and Executing the Strategic Air Campaign Against Iraq* (Washington, DC: GPO, 2003).

[4] Edward J. Marolda and Robert J. Schneller, *Shield and Sword: The United States Navy and the Persian Gulf War* (Washington, DC: GPO, 1998; reprint 2002 by Naval Institute Press). The Marine monographs can be found on the Marine Corps Museum and History Division Web site. These Service-centric historical center publications represent a tip of the iceberg. Both the Army and Air Force have extensive field history programs with historians assigned to produce additional studies and monographs for the major commands they serve. For example, in 1996, the Army Corps of Engineers History Office published *Supporting the Troops: The U.S. Army Corps of Engineers in the Persian Gulf War.* A further negative indicator of the overall joint value of these narratives is their non-use in Joint Military Operations courses offered by the U.S. Naval War College.

[5] Richard G. Davis, *Decisive Force: Strategic Bombing in the Gulf War* (Washington, DC: Air Force History Support Office, 1996).

[6] Charles H. Briscoe et al., *Weapon of Choice: U.S. Army Special Operations Forces in Afghanistan* (Fort Leavenworth, KS: Combat Studies Institute Press, 2003), is the first book of an Army special operations forces history series; *The United States Army in Afghanistan: Operation ENDURING FREEDOM—October 2001–March 2003* was published as Center for Military History Publication 70-83-1. Marine Corps publications include Nicholas Reynolds, *Basrah, Baghdad, and Beyond: The U.S. Marine Corps in the Second Iraq War* (Annapolis, MD: Naval Institute Press, 2005); Michael S. Groen et al., *With the 1st Marine Division in Iraq: No Greater Friend, No Worse Enemy* (Quantico, VA: Marine Corps University History Division, 2006); and C.M. Kennedy et al., *U.S. Marines in Iraq, 2003: Anthology and Annotated Bibliography* (Washington, DC: U.S. Marine Corps History Division, 2006).

[7] The Air Force and Marine Corps depend on Individual Mobilization Augmentee Reservists who report, respectively, to the Air Force Historical Research Agency at Maxwell Air Force Base, Alabama, and the Marine Corps Historical Center in Washington, DC. The Army mobilizes three-person Military History Detachments from the Army Reserve and National Guard to capture history. The Naval History and Heritage Command in Washington, DC, is the gaining command for Naval Reserve Naval Combat Documentation Detachment 206.

[8] Chairman of the Joint Chiefs of Staff Instruction 5320.01A, "Guidance for the Joint History Program," August 14, 2003.

[9] Frank N. Schubert, *Other Than War: The American Military Experience and Operations in the Post–Cold War Decade* (Washington, DC: Joint History Office, 2013), iii.

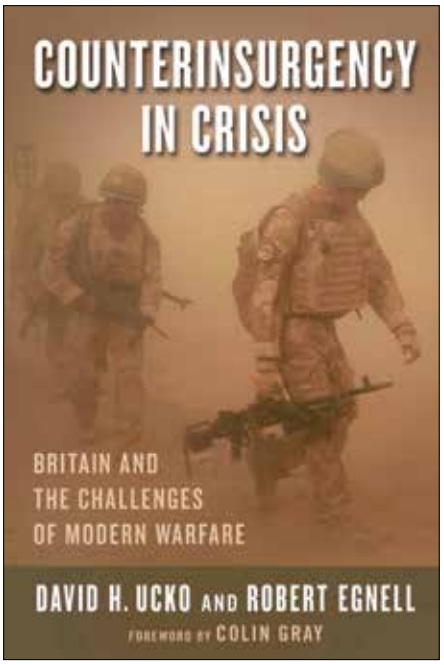
[10] John Partin, the U.S. Special Operations Command historian for two decades, retired in 2008.

[11] See National Defence and the Canadian Forces, Directorate of History and Heritage, available at <www.cmp-cpm.forces.gc.ca/dhh-dhp/index-eng.asp>.

[12] Active-duty strength of the Canadian Armed Forces is 68,250. See Global Fire Power, available at <www.globalfirepower.com>.

[13] See Defense Media Activity, available at <www.dma.mil>.

[14] This concept was presented by Peter Swartz of the CNA Corporation at the Naval Historical Center Stakeholder Meeting, October 19–20, 2004, at the Washington Navy Yard. Subsequently, the Naval History and Heritage Command has developed a proactive Communications and Outreach Division that provides a good template for a Defense History and Heritage Agency marketing/public affairs organization.



Counterinsurgency in Crisis: Britain and the Challenges of Modern Warfare

By David H. Ucko and Robert Egnell
Columbia University Press, 2013
250 pp. $26.00
ISBN: 978-0231164269

Reviewed by F.G. Hoffman

Writing in his seminal *The British Way in Counter-Insurgency*, David French concluded that the United Kingdom had created a "chequered history of gathering, analyzing, and disseminating the lessons" from its irregular campaigns. This conclusion contrasts with Dr. John Nagl's case study of Britain's superior organizational learning in Malaya in his *Eating Soup with a Knife*. Both books focused on Britain's imperial past. More recently, veterans from the United Kingdom's campaigns in Iraq and Afghanistan have sided with French, stating that "despite our institutional [counterinsurgency] heritage," the study of small wars "[has been] relegated to a position of almost complete institutional irrelevance."[1] This is now reinforced by a new assessment of British operations, *Counterinsurgency in Crisis*, which argues that Her Majesty's armed forces overestimated the relevance of their past imperial policing to contemporary challenges.

If you want to read a sentimental regimental history of valor and glory in Iraq and Afghanistan, you will want to pass on this book. *Counterinsurgency in Crisis* is not draped in mythology; it is a sober, dispassionate, and objectively critical evaluation of British strategic performance. Both authors have stellar scholarly credentials and excellent prior works on counterinsurgency. Dr. David Ucko teaches at the College of International Security Affairs, a component at the National Defense University. His Swedish writing partner, Dr. Robert Egnell, was a visiting professor at Georgetown University. Together they have produced a scathing indictment of British preparation, strategic direction, and operational practice in contemporary conflict. Their brutal bottom line: "There is no fig leaf large enough here to cover the deep flaws in the British government's own approach and conduct in their counterinsurgency campaigns."

The United Kingdom's poor showing in Iraq and Afghanistan is multidimensional. One shortfall identified by the authors was the existence of a smug perception that British forces were uniquely qualified in counterinsurgency because of the United Kingdom's extensive experience in Africa and the Middle East, peace support tasks in the Balkans, and of course, Northern Ireland. Much of that experience was dated and certainly not well represented in British doctrine or military education. Ucko and Egnell found that this unique heritage retarded learning and adaptation, further degrading performance.

The authors' transition to an assessment of the strategic level does not improve their view of British counterinsurgency efforts. While strategy requires a clear alignment of ends, ways, and means, "strategy making for Bara and for Helmand was marked by the failure to grasp the nature of the campaign, to adapt once new realities came to the fore, and to resource these efforts, both politically and financially, to achieve a clearly established objective." Some may suggest that counterinsurgency doctrine was flawed or, as the title of the book suggests, a concept in crisis. But the real problem was simply too little strategic thinking and too few forces, something the authors document depressingly well. The principal challenge, however, was shortfalls in strategic thinking. As Ucko and Egnell observe, "the British capacity for strategic thinking—its ability to formulate a campaign plan—has proved consistently and fatefully problematic throughout the last decade of operations."

This will not be news to informed students of British security matters. British generals, including Lieutenant General Paul Newton, who now heads the Center for Strategy and Security at Exeter University, have argued quite openly that the strategy flame is unlit in London. Former Chief of the Defence Staff Air Chief Marshal Sir Jock Stirrup decried the loss of "an institutional capacity for and culture of strategic thought."[2] After considering the past decade, looking at the prospects of a security environment laced with instability and complex contingencies similar to the last decade, Ucko and Egnell conclude their book with an ominous assessment of current British capability.

The United Kingdom entered two wars with an overestimation of its grasp of contemporary conflict, inadequate machinery and poor practice at linking its objectives to a sound strategy, and a military culture that was short on education but long on improvisation and "cracking on."[3] Doctrine was lacking, but counterinsurgency theory cannot be a panacea for so many structural, educational, and cultural gaps. Nor can shortfalls in our understanding of contemporary insurgency be employed as an excuse to shelter less than stellar strategic competence in London (or Washington for that matter).

Ucko and Egnell do not believe that the United Kingdom's Ministry of Defence has fully grasped the formidable tasks inherent to modern warfare, nor has it adapted sufficiently for stabilization missions. They find it clear that civilian elites are not embracing the necessary

changes in government to support even a respectable role for the country in the most likely of scenarios.

What makes Ucko and Egnell's work unique and invaluable is its take on future missions and its evaluation of options for British policy planners. Given the reduced resources and the experiences of the last decade, they concisely examine the merits of scaling down British contributions to niche investments, employment of more indirect approaches, and greater burden-sharing with regional organizations. The authors are doubtful that these approaches will meet British political objectives, noting that "strategic abstinence and 'strategic selectivity' are options fraught with a different type of risk, particularly for a state with global expeditionary ambitions or when alliance commitments come into play." Given the U.S. ambitions and its role in the world, American strategists should take serious note of Ucko and Egnell's conclusions.

This is a serious and objective scholarly analysis of British strategic and operational performance. The United States needs a similar assessment, as its leaders and key decisionmakers have been less willing to come to grips with its own shortfalls in the council chambers of government. Hopefully, someone in the United States will take up the challenge of writing a similar book about U.S. strategic performance.

Because of its objective analysis and solid scholarship, *Counterinsurgency in Crisis* is recommended to professionals in the transatlantic community interested in strategic studies, civil-military relations, military history, and contemporary conflict. **JFQ**

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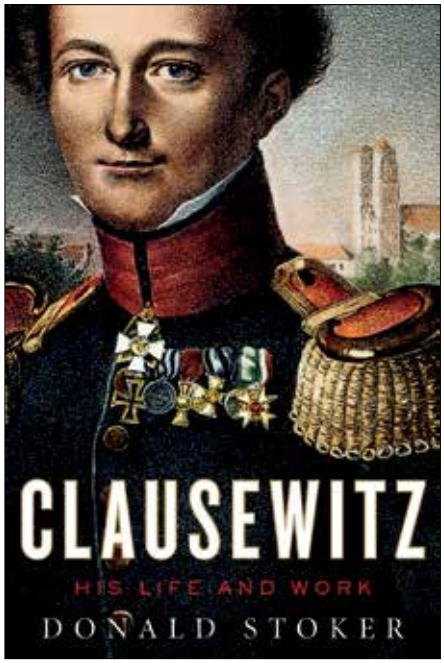
Notes

[1] Alexander Alderson, "Counter-insurgency: Learn and Adapt? Can We Do Better," *The British Army Review*, no. 142, Summer 2007.

[2] Cited by Andrew Mackay, "Helmand 2007–2008: Behavioural Conflict," in *British Generals in Blair's Wars*, ed. Jonathan Bailey, Richard Irons, and Hew Strachan (Burlington VT: Ashgate 2013), 261.

[3] See the chapter titled "Cracking On: British Military Culture and Doctrine" in Frank Ledwidge, *Losing Small Wars: British Military Failure in Iraq and Afghanistan* (New Haven: Yale University Press, 2011).



Clausewitz: His Life and Work

By Donald Stoker
Oxford University Press, 2014
354 pp. $27.99
ISBN: 978-0199357949

Reviewed by John T. Kuehn

Donald Stoker, a professor of strategy and policy at the Naval Postgraduate School, has written what could be labeled a military biography of Carl von Clausewitz. One might reasonably ask why a biography of the Prussian general and military theorist is necessary, given Peter Paret's towering intellectual biography *Clausewitz and the State* (Princeton University Press, 1985).

The answer is threefold: new sources, new scholarship, and accessibility for new audiences. Stoker's biography is also the result of a fruitful collaboration with Vanya Eftimova Bellinger, the first historian to publish a biography in English about Clausewitz's formidable wife and intellectual partner, Countess Marie von Brühl. Together, Stoker and Bellinger mined a treasure trove of recently rediscovered correspondence between Carl and Marie held in Germany by the couple's descendants. Stoker sprinkles this correspondence throughout his work, and it provides great value in understanding Clausewitz as he confides his innermost thoughts to his soulmate, the woman who took his unfinished work and had it published. The author also uses Clausewitz's own histories as well as those of his contemporaries (including Antoine-Henri de Jomini) to inform his work, including recent English translations of Clausewitz's work such as that of the Waterloo campaign by Christopher Bassford. In addition to these primary sources, Stoker uses the most recent and cutting-edge Napoleonic scholarship on key campaigns by Alexander Mikaberidze and Michael Leggiere.

Finally, there is the issue of accessibility for new audiences. Stoker states that his purpose for the book is to answer the question "How did it come to be written?" The reader learns that from the age of 11 until his death in 1831 at the age of 51, Clausewitz served first and foremost as a soldier. This speaks to the book's appeal to military professionals. Stoker has made Clausewitz more accessible to the military professionals of today by putting him into the context of his times as a long-serving soldier—including his disappointments, frustrations, and personal experiences with cold, heat, thirst, and danger—providing additive credibility and a human dimension. Readers meet a human Clausewitz who felt pain, hunger, and loneliness, experienced setbacks, and struggled with chronic ailments such as gout and arthritis throughout his life.

Readers will also discover in detail Clausewitz's participation in some of the most famous campaigns of the French and Napoleonic wars, including Russia in 1812 and Waterloo in 1815, as well as some of the more obscure battles. These

include formative experiences fighting limited and even irregular war as an adolescent in the 1790s, and serving as a de facto chief of staff to a multinational corps in the little-known northwestern German theater in 1813. Readers will find of particular interest the chapter titled "The Road to Taurrogen (1812)," which serves as the median of the book. Stoker argues, correctly in this reviewer's assessment, that Clausewitz's greatest historical triumph was achieved as an officer *in the Russian army* at this obscure Lithuanian village where he served as an agent for the Prusso-German uprising against Napoleon in the wake of the disastrous Russian campaign.

It is, however, Clausewitz's great intellectual triumph, *On War*, that permeates the book, as well it should. Stoker does a commendable job of interweaving and referring to the evolution of Clausewitz's key ideas on war, including friction (48, 101), center of gravity (100), and defense, including the idea of "political defense" (97). All of this occurs against the backdrop of Clausewitz's life as a professional soldier who, at the same time, was developing into a impressive military intellectual, historian, and theorist. For example, Stoker highlights Clausewitz's early writing on the relationship between war and policy in his treatise *Strategie* in the period between Prussia's wars with France from 1796 until 1806. The Clausewitz revealed here is the original ends-ways-means guru, and this emerges in spades in the writing that Stoker highlights. Furthermore, if a man is to be judged by the character and esteem of his closest friends, Clausewitz ranks high in this regard due to Gerhard von Scharnhorst and August Neidhardt von Gneisenau, two giants of German military history whom Stoker portrays as virtual foster fathers to Clausewitz.

With the end of the Napoleonic wars in 1815, Stoker moves into the endgame of the book, the lengthy penultimate chapter titled "The Sum of It All (1813–1831)," which provides readers an excellent precis of Clausewitz's major ideas as outlined in *On War*. Stoker does this against the backdrop of the historical framework of Clausewitz as director of the *Kriegsakademie* (the Prussian military academy) in Berlin. Stoker suggests that Clausewitz, his life-long desire for a major accomplishment in war and combat stymied, turned to his *meisterwerk* as an outlet. Clausewitz, as one of the Prussian reformers, could do little else in the reactionary political environment that prevented him—and his mentor Gneisenau—from exerting real influence in the Prussian military and state. Stoker argues that this, in fact, resulted in a far greater and lasting triumph: "The fame Clausewitz hoped to win for himself—with sword in hand—he won with his pen" (287). Stoker also manages to skillfully avoid becoming mired in the major Clausewitz "controversies," while still making the reader aware of them and adding value to those debates. For example, on the issue of just how finished *On War* really was, Stoker writes, "In reality we simply don't know how complete *On War* truly is, and this is a question that cannot be definitively answered because we know that Clausewitz never finished the book" (264). Readers can draw their own conclusions. My own position is that had Clausewitz died at the ripe old age of 80, the manuscript would still have been sitting in his closet unpublished. Had he outlived his devoted wife, Marie, we might never have seen it.

Although a very well-written book, there are a number of discontinuities. For example, the larger historical narrative of the Napoleonic wars at times becomes desynchronized with Clausewitz's role in those events. This is especially true later in the book when the reader is taken back in time as the allies prepared to drive on Paris in 1814, to the summer of 1813 when Clausewitz assumed the role of chief of staff to the corps of General Count Ludwig von Wallmoden-Gimborn observing Marshal Louis-Nicolas Davout in Hamburg. However, these problems fade when one considers the totality of what Stoker has accomplished in his book. For those readers who want a clear and up-to-date biography of Clausewitz as a soldier—without myth and without excuse—I can think of no better title to have on the bookshelf right next to *On War*, which is where it is on mine. This book is absolutely essential for military and security professionals, and deserves as broad an educated readership as possible. **JFQ**

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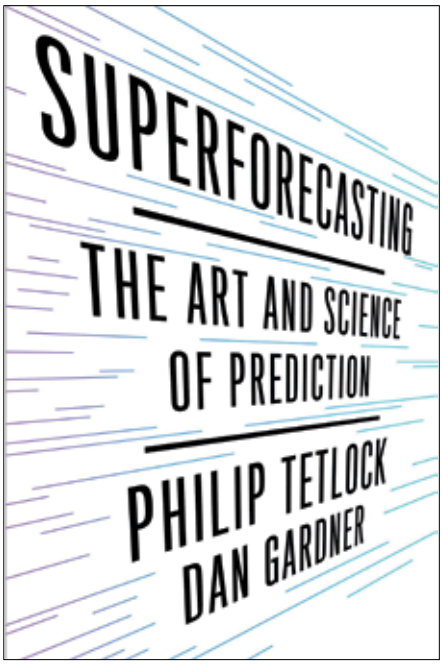

Superforecasting: The Art and Science of Prediction

By Philip Tetlock and Dan Gardner
Crown Publishing Group, 2015
352 pp. $20.51
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Reviewed by Michael J. Mazarr

Philip Tetlock has worked for decades on the problem of judgment in national security affairs. He became justly renowned for his book *Expert Political Judgment: How Good Is It? How Can We Know?* (Princeton University Press, 2006), which demonstrated, among other things, that foreign policy experts were no more accurate in their forecasts than

"monkeys throwing darts." Tetlock's somewhat alarming finding led to a series of intriguing questions: Just how good can judgment become? Can we do better than the "experts"?

This innovative line of research laid the foundation for a new book, *Superforecasting: The Art and Science of Prediction*, co-authored with journalist Dan Gardner. It surveys techniques used by the most successful individuals and teams in Tetlock's Good Judgment Project (GJP), a series of forecasting tournaments in which participating analysts, many from careers far removed from national security, make predictions on key issues: Will oil prices fall below $30 a barrel within a year? Will Japan decide to place troops on a disputed island in the next 6 months? The questions deal with discrete issues and are precise, asking about a particular event or choice. They also are framed within a specific period of time, from 1 month in advance to 1 year.

Tetlock has found that some people do in fact perform far better in such contests than others—repeatedly, reliably, and controlling for other variables. Top GJP forecasters beat a control group by 60 percent in the first year and by 78 percent in the second. As Tetlock states, they even "outperformed professional intelligence analysts with access to classified data." One could quibble with the approach. The narrowest interpretation of these findings, for example, might not be that surprising. Confronted with precise questions dominated by a handful of known variables, forecasters who give exceptional care to facts and probabilistic guidelines such as base rates will surely do better than more casual dart throwers.

The project also risks equating forecasting with "judgment." Tetlock himself admits that "foresight is one element of good judgment, but there are others." Judgment ultimately is about what *to do*, and it is not guaranteed that people who excel at one will be good at the other. Someone who excels at using probabilistic methods to guess at the future price of corn might fail miserably at integrating the multiple strategic and political implications of a complex security choice.

This conflation speaks to a core assumption of the project—and a third possible objection. Tetlock is a numbers guy, interested in quantifiable results from probabilistic analysis. This is helpful to a certain extent. For complex, ambiguous national security decisions, however, it is not clear how far that is. Tetlock is explicit about this distinction—between linear or deterministic choices and thoroughly complex ones. He refers to the analytical challenges of "the butterfly dynamics of nonlinear systems" and uses the common metaphor of clouds and clocks to distinguish mechanisms whose variables and causal relationships are known from an unfolding complex system. He downplays the difference, however, describing the hard-and-fast distinctions as "false dichotomies." Yet the problem of which strategy will best deal with Russia *is* a fundamentally cloud-like enterprise, and no forecasting-style probability exercise is likely to furnish an answer that is objectively better than others.

This is very likely one reason why senior leaders are so resistant to structured efforts to improve decisionmaking. At the end of the day, what they are doing is educated guesswork—and they know it. The most decisive factors in their choices are norms, values, political considerations, and bureaucratic constraints that cannot be assigned precise values. As a result, most such officials ascend to high office having built, usually over a long period of time, a well-honed, experience-based intuition that they trust more than any analytical method. (Tetlock recognizes this and cites research that demonstrates how in real decisionmaking settings, "these educated, accomplished people reverted to the intuitive.")

Despite these concerns, Tetlock's research—thoughtful, innovative, and arriving amid a tsunami of evidence about the risks to senior leaders of cognitive bias and thoughtless heuristics—demands to be taken seriously. More than that, it invites the U.S. Government to get more serious about the process of making national security decisions. Among other things, Tetlock's research is one of the first large-scale empirical efforts to demonstrate the clear value of enhancing the rigor and quality of judgments. As his superforecasters suggest, exacting procedures do tend to improve results. They ask well-designed, critical questions and apply careful analytical methods. Furthermore, they ultimately find ways to understand issues more thoughtfully and accurately than people who ignore such methods on the way to a far more imprecise guess. Tetlock's efforts have also demonstrated hopeful ways to put thinkers together in teams that self-correct their own analytical errors, rather than exacerbate them.

In this sense, Tetlock's work complements the insight of such scholars as Daniel Kahneman, Paul Slovic, Robert Jervis, and many others who have been warning for decades about the risks of simplified and often biased cognitive patterns. And it is only a small leap from Tetlock's findings to the context of complex national security judgments: An intuitive, emergent choice *informed by* and *willing to take seriously* the results of rigorous analysis will have a better batting average, even if the final judgment remains unavoidably subjective and impressionistic.

If we are to take seriously this line of thinking about thinking, it becomes clear that future U.S. administrations that are serious about the quality of their judgments no longer have any excuses. They ought to create more formalized decision analytical processes designed to maximize the rigor and accuracy of even complex choices.

This could involve, for example, an effort to build—probably on the base of a specialized unit in the National Security Council (NSC)—both the habits of mind and specific techniques and tools characteristic of superforecasting groups. Some questions or principles would be integrated into all interagency processes and policy documents, while some techniques would be applied to particular decisions, depending on their issue or character. Over time, paralleling Tetlock's emphasis on outcomes, the effort could track the accuracy of various sub-judgments, that is, discovering where they were right and where wrong, and looking for consistent patterns.

This would be tremendously difficult to organize. Senior officials have little interest in being forced through analytical gymnastics to reach conclusions that can never be proved better than intuitive guesswork. Moreover, they will often lack the time needed to undertake anything more than a cursory process. A senior director for analytic methods at the NSC, however, could help shape the design of options papers, push groups to consistently ask the right questions, warn top decisionmakers about encroaching bias, and introduce more formalized decision techniques when time is available. The idea would not be to build an intricate, highly theoretical process, but to take elements likely to be present in any policy process—background papers, options papers, interagency dialogues, Cabinet-level meetings—and supercharge their analytical rigor.

There seems little doubt that formalizing such methods in the national security process, at least in slimmed-down versions appropriate to the pace of decisionmaking, would avoid the occasional disaster and create insights that generate new opportunities. At a minimum, now that research such as Tetlock's has made clear the potential value of formally rigorous thinking, it would seem irresponsible not to find out. **JFQ**

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Relief supplies from USAID unloaded off Marine Corps UH-1Y Venom from Joint Task Force 505 in remote area of Nepal during Operation *Sahayogi Haat* (U.S. Marine Corps/Hernan Vidana)

Interorganizational Cooperation III of III

The Joint Force Perspective

By James C. McArthur, Cara Allison Marshall, Dale Erickson, E. Paul Flowers, Michael E. Franco, George H. Hock, George E. Katsos, Luther L. King, William E. Kirby, William M. Mantiply, Michael E. McWilliams, A. Christopher Munn, Jeffrey K. Padilla, Elmer L. Roman, Raymond E. Vanzwienen, and Jeffrey P. Wissel

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This article completes a trilogy on interorganizational cooperation—with a focus on the joint force perspective. The first article discussed civilian perspectives from across the U.S. Government and their challenges in working with the military and highlighted the potential benefits of enhancing unity of effort throughout the government.[1] The second article presented humanitarian organization perspectives on interfacing with the military and served to illuminate the potential value of increased candor and cooperation as a means to develop mutually beneficial relationships.[2] In this final installment, the discussion focuses on how the joint force might assess and mitigate the issues raised by the first two articles through application of the joint doctrine development process.[3] This article also explores how joint doctrine can assist in developing and sustaining the relationships that are essential for building effective and cooperative processes in the operational environment. Although the authors

accept that cultures and missions vary widely among different types of organizations, we suggest there is a mutual benefit to be achieved from deep understanding of not only one's own organization but also each other's perspectives, methods, and structures.

Background

In the first two articles, we merged the terms for civilian-led *departments*, *agencies*, *organizations*, and *groups* into one single term: *organizations*. The sole purpose for consolidating these terms was to provide a simple, consistent expression to capture the entirety of nonmilitary personnel. The trilogy's title also prompted discussion among the authors regarding the nuances between *coordination*, *collaboration*, and *cooperation*.[4] *Coordination* is a term commonly used within the Department of Defense (DOD) and is often misunderstood as synonymous with both *collaboration*, which is akin to an interagency approach to command and control, and *cooperation*. Within the larger government, *coordination* may imply the presence of a hierarchical relationship where the higher authority directs coordination among organic and external organizations. This prospect often causes concerns for civilian organizations, particularly when the military is involved. Therefore, especially within diplomatic circles, the term *collaboration* is frequently used instead. *Collaboration* is more acceptable within the government since it implies the existence of parallel organizational processes working toward a common solution. However, to some humanitarian organizations, when this term is used in the context of working with the U.S. or other military organizations, it creates a risk of blurring perceptions of impartiality, which humanitarian organizations consider essential for their operations. For those organizations, the term most commonly used is *cooperation*. Since the U.S. military can benefit from communicating and information sharing with any civilian organization, the authors chose to use the term *interorganizational cooperation* to highlight the importance of developing and maintaining relationships with all civilian organizations.

The term *policy* also needs clarification in the context of civilian policy or military strategic documents that influence joint doctrine. Unless otherwise stated, use of the term *policy* here refers to civilian policy. Lastly, we address the difference between the political and military use of the term *doctrine*. Civilians in the political sphere often use the term *doctrine* to describe a political policy (for example, the Truman Doctrine, Monroe Doctrine, the responsibility to protect doctrine). This distinction may cause confusion when communicating with the joint force about joint doctrine, which the military uses to describe the documentation and maintenance of best practices used for guiding commanders and their staffs for the employment of military forces. Policy and joint doctrine each play unique roles in providing the objectives and frameworks under which organizations conduct operations. Accordingly, comprehension of the appropriate roles of policy and joint doctrine is essential to understanding how and why different organizations adapt to real world conditions.

Policy and Joint Doctrine

Advancement of interorganizational cooperation is directly impacted by the relationship between joint force development and policy development. Since the joint force is admittedly not a one-size-fits-all solution to U.S. foreign policy issues, the joint force must develop policies and new joint doctrine to shape and evolve today's warfighters to embrace interorganizational cooperation as a core competency of the future force. As such, the Joint Staff J7 Joint Force Development Directorate performs five functions: joint doctrine, joint education, joint training, joint lessons learned, and joint concept development.[5] This article focuses primarily on the role of joint doctrine and its relationship with other joint force functions.

The fundamental purpose of joint doctrine is to formally capture how the joint force carries out certain functions, which in turn prepare successive generations of warfighters to carry out and improve on best practices employed in different operational environments. Policy acknowledges joint doctrine but also provides an authoritative source for required actions—goals or objectives—or specific prohibitions, which guides the joint force to carry out operational functions in a legal and ethical manner, ultimately driving joint doctrine development. Policy and joint doctrine work together constructively to inform and assist DOD with joint force development and risk management assessments. Despite their separate and unique purposes, policy and joint doctrine offer critical synergies during the development of standardization (for example, terminology, command relationships) and commonality across DOD.

Lack of agreement normally occurs during the development of joint doctrine, as various subject matter experts can often be unfamiliar with the joint doctrine and policy development process and the different role that each contributor plays. As joint doctrine plays a prominent role in influencing joint force development, many incorrectly assume that since civilian policy also influences joint force development, that policy is synonymous with joint doctrine. The fact is they are dissimilar; policy can provide an impetus for new practices, while joint doctrine provides a historically influenced and vetted repository of joint force best practices that serves as a starting point for the conduct of military operations. There is a great potential for disagreement between civilian organizations and DOD during development of crisis response options in situations where the joint force perceives that the desired investment of resources and preferred outcomes on the part of policymakers are at odds with the military courses of action. In these instances, an understanding of the relevant joint doctrine provides policymakers with a common foundation from which to discuss appropriate concepts and levels of risk.

On the other hand, institutionally speaking, DOD planning in the absence

of established joint doctrine can be challenging. For example, in 2011, the U.S. military's involvement in preventing a potential mass atrocity in Libya underscored the lack of joint doctrine specific to the unique challenge. As a result, the joint force defaulted to the closest concepts available even though they were inadequate to the particular situation. Despite prior recognition of the joint doctrine gap, the adaptation of mass atrocity doctrine into joint doctrine was developed subsequent to and as a direct result of actual policy developments.[6] While joint doctrine is clearly influenced by policy, it also requires frequent updates to remain relevant. Due to its sheer size, no other U.S. Government organization operates with the same scope or scale as DOD; joint doctrine provides a standing framework for DOD organizations to function and from which to adapt over time. An understanding of the interplay in the roles of policy and joint doctrine is critical to ensuring effective adaptation within the joint force.

New challenges in the future operating environment will require increased interorganizational cooperation to better align joint force capabilities with national policy decisions. The ability to integrate joint doctrine with civilian activities, or to at least have a fundamental understanding of civilian policy and procedure development, will help reduce planning, execution, and acquisition timelines when assessing courses of action and implementing them. Policy can arguably be viewed as easier, faster, and more responsive to short-term requirements, yet policy—just like joint doctrine—is not infallible since it too can be forced to adapt to real-world conditions. As the joint force develops its courses of action from a doctrinal foundation, ad hoc policy creation in support of political course corrections may create unintended consequences in interorganizational cooperation and unity of effort. This fact underscores the need for both political and military establishments to work together to align both policy and joint doctrine for efficient achievement of the desired strategic endstate.

Figure 1. Examples of Policies That Drive Workforce Execution

	Overarching Policies National Security Strategy Presidential Directives	
Internal to U.S. Government	**Civilian Workforce** ▪ Organizational Strategic Plans, Priorities, and Cross-Agency Priority Goals ▪ Quadrennial Reviews ▪ Embassy Mission Resource Plans ▪ Country Development Strategies and Plans ▪ National Strategy for Homeland Security ▪ National Response Framework	**Military Workforce** ▪ Unified Command Plan ▪ National Defense Strategy ▪ Quadrennial Defense Review ▪ Strategic Planning Guidance ▪ National Military Strategy ▪ Joint Strategic Capabilities Plan ▪ Directives, Instructions, and Memoranda
External to U.S. Government	**Overarching Policies** ▪ International Conventions, Protocols, and Statutes ▪ Charters, Resolutions, and Declarations ▪ Treaties ▪ Institutional Policies and Strategic Plans ▪ Frameworks and Guideline Documents ▪ Organizational Mandates ▪ Foreign Government Defense and Diplomatic Strategies and Plans	

Doctrine-Based and Rules-Based Workforces

Interoperability between doctrine and rules-based workforces offers a means to produce military and civilian leaders who understand interorganizational cooperation and how to coordinate and build synergy. The authors presume for this discussion that most organizations are values-based—that is, they are made up of morals, attributes, or principles that guide mission selection, strategic planning, objective identification, and decisionmaking. These values-based organizations conduct activities guided by their organizational policies as implemented by their strategic documents, mandates, and administrative norms. Strategic documents generally guide both civilian and military organizational objectives, while policy documents determine the operational rules that impact routine business. For civilian organizations, these rules can take the form of administrative instructions, organizational mandates, policies, directives, or other tools as captured in figure 1. These civilian organizations provide certain capabilities for foreign or domestic assistance, and each organization provides its own workforce to contribute to the whole-of-government effort—in this case, through rules-based workforces.

In contrast, while civilian policies can outline workforce approaches to achieve objectives (figure 1), joint doctrine serves a greater role for the military in defining operational forces. Within the U.S. Government, the DOD operational workforce known as a "joint force" deploys under the authority of a combatant commander, whose operational forces are primarily organized as a joint force or can also be a single-Service force to meet specific operational objectives. The remaining DOD organizations exist to support the joint force, either via logistics, management, and support functions or by the "organize, train, and equip" functions of the Services. Depending on mission requirements and the operational environment, a joint force may contain a range of functional capabilities provided by multiple Services. The joint force streamlines decisionmaking by establishing a hierarchical command and control structure within the joint doctrine framework that also allows sufficient flexibility to adapt to new challenges; thus, the joint force exists as a doctrine-based workforce.

Despite the advantages of organization and efficiency, a doctrine-based workforce such as the joint force has

Helicopter assigned to USNS *Matthew Perry* (T-AKE-9) transports personnel to medical exchange during Association of Southeast Asian Nations Humanitarian Assistance/Disaster Relief and Military Medicine Exercise, hosted by Brunei, June 2013 (U.S. Navy/Paul Seeber)

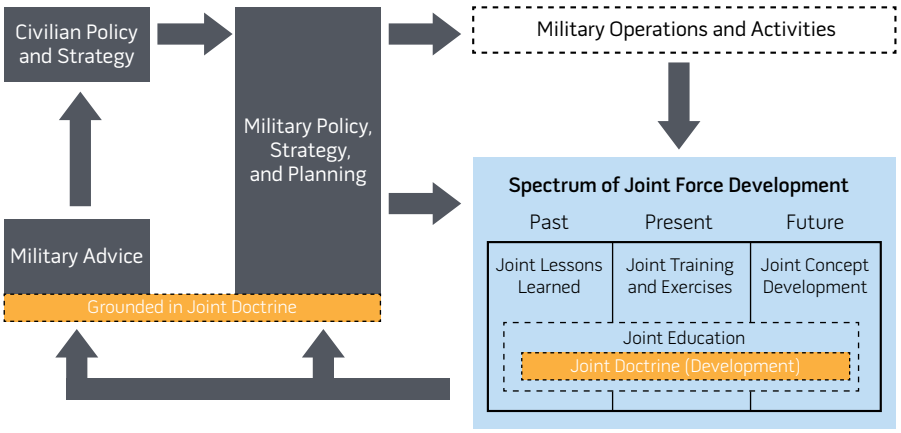
drawbacks. Lengthy planning cycles, a bureaucratic vetting and staffing process, and a strong institutional cultural bias toward action may be reasons that civilian leaders employ non-DOD organizations with security-like capabilities but without doctrine-based constraints. However, the joint doctrine development process is consciously designed to be adaptable. It provides the means to develop and promulgate new joint doctrine within 1 year, and in the case of existing joint doctrine, urgent change recommendations can be incorporated and promulgated in a significantly shorter time frame.

A significant challenge arises when the military seeks to incorporate civilian viewpoints into its joint doctrine development process. Bringing together separate frameworks requires an understanding that, in contrast to military organizations, civilian organizations may not formally publish comparable doctrine that is reinforced by best practices as compared to the joint force; however, civilian organizations are nonetheless governed by their own internal rules even if those rules are not called "doctrine." These rules, however, are not always intrinsically grounded in proven organizational best practices and could lead to varying interpretations across organizational components. They can be affected by personality-driven planning and cross-organizational conflict within a multi-organization environment. The cultural contrast between a doctrine-based and rules-based workforce is a principal driver of the miscommunication, divergent planning, and political discord that can plague any multi-organization endeavor. From a joint force perspective, understanding the organizational rubrics and cultures that guide civilian organization activities is a critical step toward the establishment of more effective cooperation across organizational boundaries. This remains a primary challenge for the military as it seeks to incorporate civilian perspectives into joint doctrine development.

The basic notion of a workforce implies a level of standardization and commonality that provides an opportunity to establish effective cooperation across organizational boundaries. While acknowledging that doctrine-based and rules-based workforces have different constraints, there is often a core set of standards and values that govern both workforces. For DOD, identifying this common set of core values and standards and integrating a more thorough understanding of the systems, processes, and cultural dynamics of relevant civilian organizations into joint doctrine will assist with understanding and developing

a joint force plan to construct an overall government approach to a military operation. Costs, complexity, and the need to support globally integrated operations combine to necessitate the incorporation of civilian perspectives into joint force planning and execution—and, by extension, into joint doctrine. While many, if not most DOD and civilian organizational functions and capabilities may not be interchangeable, they may be interoperable and in some cases interdependent. Incorporating civilian perspectives into joint doctrine offers potential benefits of optimizing resources and minimizing redundancies without compromising efficiency or operational success.

Figure 2. Joint Doctrine Influence



Joint Doctrine Influence

Joint doctrine that recognizes the intrinsic value of civilian perspectives can ultimately drive interorganizational cooperation by striking a balance between military and civilian influences concerning military capabilities (for example, current force structures, equipment, and resources), capability development, and resource investment. Led by the Joint Staff J7, the joint force development process integrates documented military Service capabilities to execute assigned missions. For purposes of this article, the spectrum of joint force development is grouped into past, present, and future phases, which respectively provide historical lessons and experiences, current operating frameworks, and considerations for adaptation (see figure 2). While civilian governmental policies inform military policy and strategy development, operational planning, military operations, and joint doctrine development, they are also informed by military advice provided by the Chairman of the Joint Chiefs of Staff that is itself grounded in joint doctrine.

Joint doctrine incorporates principles of joint operations, operational art, and elements of operational design and standardizes terminology, relationships, and responsibilities among the Armed Forces to facilitate solving complex problems.[7] In addition, joint doctrine provides information to civilian leaders responsible for strategy development who may be unfamiliar with military core competencies, capabilities, and limitations. Joint doctrine links the National Military Strategy to the National Security Strategy and provides a common framework for military planning. It forms the basis of the ends-ways-means construct to describe what must be accomplished, how it will be accomplished, and with what capabilities.

For example, a need for an overarching policy and more organized strategy for improving the security sectors of partner nations led to the establishment of Presidential Policy Directive 23 (PPD-23), *Security Sector Assistance*, which requires a collaborative approach both within the U.S. Government and between civilian and other military organizations and is aimed at strengthening the ability of the United States to help allies build their own security capacity. PPD-23 implies unity of effort across the government through participation in interagency strategic planning, assessment, program design, and implementation of security sector assistance. The joint doctrine–specific outcome of the PPD-23 process was the requirement for a Joint Publication (JP) on security cooperation, JP 3-20.[8] Lastly, joint doctrine provides interagency, intergovernmental, and treaty-based organizations with an opportunity to better understand the roles, capabilities, and operating procedures used by the Armed Forces.[9]

The first phase in the spectrum of joint force development is the past phase that captures completed or ongoing military operations observations or lessons learned for incorporation into joint doctrine. The lessons learned component entails observation, analysis, and translation of lessons learned into actions that improve the joint force. For example, in 2012 the Director of Joint Force Development directed a more aggressive path for counterinsurgency joint doctrine development:

to guarantee we capture what we've learned about the conduct of counterinsurgency over the last decade and to harmonize joint and service efforts, I'm directing an accelerated development and release of JP 3-24, Counterinsurgency Operations (COIN). This joint publication will address the big ideas of COIN . . . providing overarching and enduring guidance, while capturing the means by which the interagency and others contribute to this critical mission.[10]

A critical outcome of joint doctrine's role in synchronizing multiple efforts across multiple domains and organizations to ensure unity of effort was also captured in DOD support to the U.S. Agency for International Development (USAID)-led Ebola response efforts in West Africa. In that case, existing processes and policies for dealing with an international health crisis such as a

regional infectious disease epidemic were initially not well defined. A fundamental understanding on how multiple civilian organizations function, to include their "rules-based approach" and how to incorporate it into DOD joint doctrinal framework, is crucial to solving complex and dynamic challenges. Integrating civilian perspectives into joint doctrine will provide a more holistic comprehension of how to plan, coordinate, and build synergy with all stakeholders.

The present phase captures training, exercises, and ongoing military operations that reinforce or identify new tasks to be performed. The Chairman's Exercise Program Division is responsible for increasing civilian organization participation through DOD training and exercise events and an annual integration and exercise workshop. Workshop forums provide excellent opportunities for DOD and civilian organizations to share approaches and discuss training events that enhance readiness, in addition to deepening relationships, partnerships, and overall crisis response preparedness.

In 2014, civilian organizations had over 200 individuals participate in DOD training and exercise events. To help expand the concept of integrating with civilian organizations, the Joint Staff J7 teamed with the United States Institute of Peace to design an interorganizational tabletop exercise (ITX). The first ITX in fiscal year 2014 included participants from 15 U.S. Government organizations and 11 other civilian organizations with the purpose of increasing cooperation and effectiveness among organizations operating in a complex crisis. When planning such exercises, it is important to include civilian organizations early during the "joint event life cycle"[11] process to ensure achievable military and civilian training objectives are identified for both entities.

In support of joint training events and exercises, a menu of tasks in a common language known as the Universal Joint Task List (UJTL) serves as the foundation for joint planning for military operations. Joint doctrine is directly aligned with the UJTL as each task is currently mapped to a primary JP at its lowest appropriate level. UJTL language and terminology must be consistent and compliant with existing joint doctrine language and terminology. Specific event training tasks or objectives and UJTLs are both essential elements of standardizing the fundamental tasks that serve to prepare and maintain joint force capabilities at their expected levels of performance.

The future phase explores new operational methods, organizational structures, and systems for employment. The absence or lack of depth of joint doctrine in a specific situation may indicate that the joint force has encountered a situation without previous experience.[12] In that case, joint concept development aids adaptation by providing solutions for compelling, real-world challenges for which existing doctrinal approaches and joint capabilities are deemed underdeveloped. Joint concepts are guided by potential future threats and provide the basis for joint experimentation, whereas joint doctrine provides the basis for education, training, and execution of current joint operations.[13] Approved joint concepts provide important potential sources of new ideas that can improve and eventually be incorporated into joint doctrine. Likewise, joint concepts inform studies, wargames, experimentation, and doctrine change recommendations.

An example of joint concepts incorporating lessons learned and impacting joint doctrine is the Joint Concept for Health Services, which stemmed from Iraq and Afghanistan combat operations and medical integration in the early 2000s. The medical community's performance was impressive and contributed to the highest survival rate during wartime in recorded history. Although the military medical community made significant strides, it did not institutionalize the many advances in medical operations achieved through collaboration in the war zone. This debate is contributing to the revision of JP 4-02, *Health Services.*[14] Another example showing the impact on the joint doctrine hierarchy is the Joint Operational Access Concept (JOAC):

the JOAC focuses on the ability to overcome anti-access and area-denial challenges and project military force into an operational area with sufficient freedom of action to accomplish the mission. Implementing the JOAC currently is a comprehensive, multiyear effort managed by the Joint Staff Joint Force Development Directorate (J7) in conjunction with other Joint Staff directorates, combatant commands, military Services, and defense agencies. The joint doctrine contribution to the effort involves potential changes between now and 2020 to at least 35 JPs that span all joint functions.[15]

Finally, similar to joint doctrine, joint education provides the foundation for all phases within the spectrum of joint force development. Joint education is linked to joint doctrine in that all U.S. military education curricula must be doctrine-based and should reflect the deliberate, iterative, and continuous nature of joint force development.[16] Joint curricula should include approved joint concepts and the most recent observed lessons from across the joint force.[17] The importance for military officers to understand their leadership and cooperation roles beyond warfighting is best captured by the 50th Commandant of the U.S. Army War College, Major General William R. Rapp:

developing military leaders who are competent in the political environment of national-security strategy decisionmaking is vitally important. It requires a broad revision of talent management among the armed Services. Developing strategic mindedness goes beyond operational warfighting assignments and simply "broadening" the officers by sending them to fellowships or for civilian graduate degrees, though both are valuable. Assignments that increase the leaders' understanding of the interagency decisionmaking process and of alliance and coalition relations are critical.[18]

Thus, the synergistic value of joint doctrine and joint education lies in their ability to serve as a connective link or common thread through all joint force development functions and to provide a common framework for large, complex organizations—such as the joint force—from which to operate and adapt to new conditions in the operational

Haiti's Minister of Health looks at rash on young Haitian girl during U.S. Army Medical Readiness Training Exercise in Coteaux, Haiti, April 2010 (U.S. Army/Kaye Richey)

environment. Given the continued importance of whole-of-government approaches during all phases of joint operations, there may be substantial value in joint force sponsorship of an implementation plan on interorganizational cooperation across the U.S. Government to identify gaps and highlight the potential benefits of sustained unity of effort across the spectrum of operations.

Civilian Perspectives and Joint Doctrine Solutions

During a JP revision or creation, the joint doctrine community conducts an intensive review of potential tasks and assembles those tasks into best practice. Each JP within the joint doctrine hierarchy serves as a framework that provides authoritative, but not directive, guidance. The joint doctrine framework plays a vital role for the joint force by integrating capabilities integral to military operations. As a result, different organizational approaches to integration present distinct challenges to incorporate civilian perspectives into joint doctrine development. Despite this challenge, the best interests of the joint force are served by deliberate efforts to overcome these challenges and integrate civilian participation into joint doctrine development.

In similar fashion to the military sources for joint doctrine, interorganizational cooperation can inform development of joint and Service-specific capabilities. In October 2011, the Chairman issued a task to ensure the Joint Staff captured the experience gained from over the last decade of war (DOW).[19] In response, the Joint Staff J7 reviewed over 400 findings and best practices from 2003 to date and sorted them into strategic themes. The studies included information from a wide variety of military operations such as major combat operations in Iraq, to counterinsurgency in Afghanistan and the Philippines, to humanitarian assistance in the United States, Pakistan, and Haiti, to studying emerging regional and global threats. The prevailing strategic themes asserted the value of a deliberate effort by the military to identify and consider civilian perspectives during the planning, execution, and transition of operations.

Four of the DOW themes are particularly relevant to reinforce the importance of incorporating civilian concerns into military objectives: interagency coordination, understanding the environment, transitions, and adaption. From these lessons we learned that:

- interagency coordination emphasized the difficulty with synchronizing and integrating civilian and military efforts at the national level, in par-

ticular during the interagency planning cycle
- understanding the environment implied assessment of the enemy threat as well as aspects of both the civilian population and friendly forces
- transitions spoke to the importance of looking beyond near-term military goals to account for the factors that will contribute to enduring success of overarching political objectives
- adaption recognized the fact that regardless of the operational foundation provided by joint doctrine, the realities and conditions on the ground combined with a "thinking enemy" will require adaption.

As the Chairman originally stated, we must "make sure we [the military] actually learn the lessons of the last decade of war."[20] Therefore, these themes must continually be assessed for integration into joint force development and serve as an enabler to build a more responsive, versatile, and affordable force.[21] Underpinning the themes are challenges to interorganizational cooperation as viewed by civilian organizations working with the military in three categories—that is, people, purpose, and process. For the most part, the issues raised by civilian organizations were not new, but continue to be raised with seemingly no resolution.

The people category speaks to communication as the cornerstone for subsequent successful mission completion. Communication challenges exist (for example, understanding doctrine-based and rules-based workforce terminology as well as civilian collaborative and military command relationships[22]); however, more frequent or routine contact that includes positive personal interaction could accelerate the process of building interpersonal relationships and trust.[23] Two ongoing efforts illustrate tangible approaches through which joint doctrine seeks to provide solutions for building trust relationships among diverse groups of people. First, the idea for "interorganizational coordination days" originated with the collaboration conducted between military and civilian organizations during the 2013 revision of JP 3-24.[24] Interorganizational coordination, as a collaborative process led by the Joint Staff J5, J7, and the Center for Complex Operations at the National Defense University reinforced the establishment of a formal interorganizational coordination mechanism for joint doctrine revision. Second, the Joint Staff recognizes the value of more routine socialization of joint doctrine with civilian organizations, which are integral parts of a complex global environment. It is imperative for the joint force to consider all aspects of specific operational environments. While threats to the joint force will obviously be paramount in any military commander's mind, consideration of the contributions of nonmilitary organizations that routinely operate parallel to the military's effort will serve all organizations in the achievement of their objectives. Proactive outreach efforts such as these seek to broaden the military's perspective on interorganizational cooperation through an exchange of experiences across multiple interagency organizations and professional education libraries.

The purpose category is centered on where to settle higher level policy disparities to align objectives, the importance of liaisons and advisors in civilian and military organizations, and on where military personnel can best contribute. Understanding roles, responsibilities, and the operating environment is essential in order for the military to effectively establish and work within a humanitarian coordination framework. In humanitarian and disaster relief situations abroad, USAID is the lead Federal entity for U.S. Government efforts. However, they routinely require military resources to achieve the immediate needs, especially in complex, time-sensitive responses. Following their assessment of a situation, USAID often looks to military organizations to assist with capabilities they do not possess, typically in areas such as airlift and logistics. Over the past 10 years, this has been the case during Operations *Unified Assistance* in Myanmar, *Unified Response* in Haiti, *Tomodachi* in Japan, and most recently *Sahayogi Haat* in Nepal. In each instance, the military responded with specialized capabilities and significant logistical support to the lead organization. As a bridge to DOD, USAID recently published its new policy on cooperation with the Defense Department.[25] From a joint doctrine perspective, JP 3-29, *Foreign Humanitarian Assistance*, was designed to assist a joint force commander and his staff during such operations.[26] Building domestic relationships and trust with local communities, the Federal Emergency Management Agency leads U.S. Government relief efforts including defense support,[27] while DOD's Innovative Readiness Training policy provides hands-on training opportunities for military Servicemembers that simultaneously addresses medical and construction needs of local communities.[28]

The process category involves developing an awareness of organizational cultures so that problems associated with duplicative efforts and faulty assumptions can be minimized through interagency cooperation. Memoranda of agreement (MOA) and understanding (MOU) as well as a "terms of reference" are good foundations for shared processes; however, an institutional-level understanding of civilian organizational cultures provides the best cornerstone for successful interaction. DOD's Promote Cooperation program is one effective means of achieving interagency cooperation through planning.[29] Also, the attempt by DOD with the Department of State and USAID in 3D Planning Group and Guide development efforts highlighted the need to bridge cooperation at the highest levels of those organizations.[30] The future challenge for successful interorganizational cooperation is to expand participation mechanisms beyond planning frameworks into areas such as joint force or civilian workforce development.

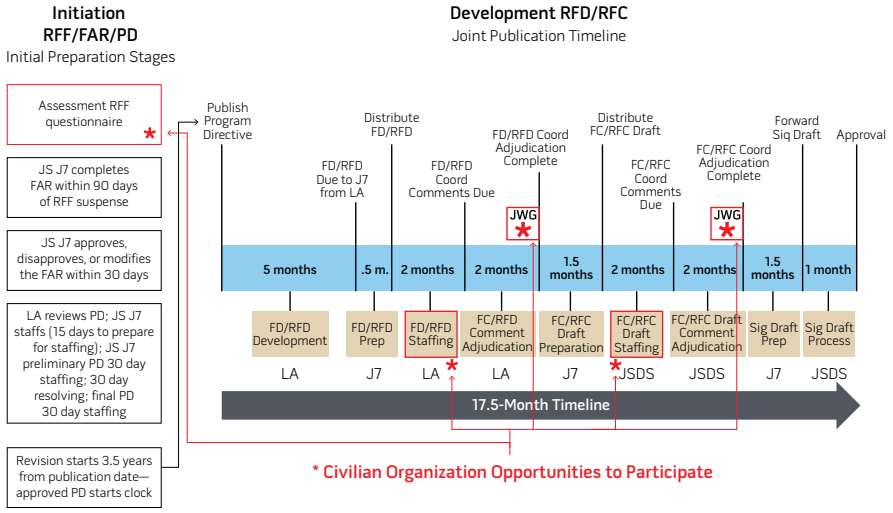
The combination of joint doctrine, education, and training plays a critical role in communication to military leaders that civil-military relationships must be more cooperative than competitive. Ultimately, there is more to gain from cooperation than by stovepiping each organization's efforts. The establishment of interorganizational offices within

combatant commands, such as joint interagency coordination groups and joint interagency task forces within a theater of operations can benefit all organizations. These organizations provide a focal point for cooperation and information-sharing and enhance planning and execution of actions across the range of military operations. The synergy generated through the combination of military capabilities and resources with civilian organizations is an effective whole-of-government approach that helps break down false barriers and achieve objectives. Although the tasks associated with harnessing the capabilities of various entities can be challenging, the end results help achieve both political and military objectives.

There are joint doctrine solutions that help fill gaps in routine planning, training, and coordinating for cooperation with civilian organizations. Current revision of several Joint Publications (JP 3-0, *Joint Operations*; JP 3-07, *Stability Operations*; JP 3-08, *Interorganizational Coordination*; and JP 5-0, *Joint Planning*[31]) highlights the need for improving the degree of institutional-level understanding between the military and civilian organizations. For example, JP 5-0 plays a key role in passing on the lessons of an iterative dialogue to planners at all levels of the military. Systems such as the Adaptive Planning and Execution system facilitate that dialogue and its associated cooperative planning efforts.[32] The development of a dedicated Web site to educate military personnel on civilian organizations via the Joint Electronic Library Web site allows searches of strategic plans, certain policies and frameworks, and provides a repository of interorganizational MOA/MOU to build the joint force's awareness of existing relationships with civilian organizations. In conjunction with these processes, the Joint Staff developed a new format for JP 3-08 organizational appendices to focus on what a joint force commander should know about civilian organizations to enhance interorganizational cooperation.

One final example of joint doctrine solutions involves the proactive solicitation of nonmilitary feedback. For example, the Joint Staff J7 Joint Doctrine Division conducted an intensive effort to obtain feedback from DOD and civilian organizations regarding the importance each placed on individual JPs within the joint doctrine hierarchy. Efforts such as these seek to identify and build more formal coordination efforts with civilian organizations during joint doctrine development and to provide a means for reciprocal joint doctrine reviews of interorganizational documents.

Figure 3. Initiation and Development Stages



Key: LA = Lead Agent (author); JS = Joint Staff; JSDS = Joint Staff Doctrine Sponsor (Joint Staff lead); TRA = Technical Review Authority (subject matter expert); RFF = Request for Feedback (assessment); FAR = Formal Assessment Request (recommendations report); PD = Program Directive–Outline; FD/RFD = First Draft/Revision First Draft; JWG = Joint Working Group; FC/RFC = Final Coordination/Revision Final Coordination; CRM = Comment Review Matrix; JSAP = Joint Staff Action Package; JDDC = Joint Doctrine Development Community; JDPC = Joint Doctrine Planner's Conference

Joint Doctrine Development Process

Joint doctrine provides the critical framework by which the military can incorporate civilian perspectives on interorganizational cooperation into its operations. Inclusion of civilian perspectives during the joint doctrine development process provides civilian organizations with an opportunity to create awareness regarding their perceived roles, capabilities, and organizational culture of their expectations, to build relationships, and to educate and inform the entire joint force—from inside the institutional level. The joint doctrine development process is managed by the Joint Staff J7 and includes the joint doctrine development community, which is primarily composed of DOD organizations and has informally expanded to provide access to civilian organizations inside and outside the U.S. Government.[33]

Joint doctrine is coordinated externally during two of the four stages of the joint doctrine development process. The average life cycle of a JP is 5 years with the most influence from civilian organizations developed during the initiation and development stages.[34]

Within the initiation and development stages, there are multiple points of entry where civilian organizations could influence actual joint doctrine text development (see figure 3). Providing feedback during the initiation stage via the request for feedback (RFF) questionnaire ensures that civilian perspectives will be vetted and socialized early in the joint doctrine development process. The output from the RFF questionnaire is a formal assessment report, which acts as a guide to structuring the JP that provides recommended themes and courses of action for the lead author and Joint Staff doctrine sponsor to use during the writing process. Once the initiation stage is complete and the process that develops the JP outline—known as the program

South Carolina Army National Guard pilots fly over major hurricane escape routes near Beaufort, June 10, 2015, during hurricane evacuation exercise (U.S. Army National Guard/Di Giovine)

directive (PD)—is solidified, civilian organizations have four other recommended opportunities within the 17.5-month development stage to provide perspectives: first draft comments, first draft working group, final draft comments, and final draft working group.

Once the development stage is complete, the JP is staffed for approval and then is published.

Conclusion

The Chairman is the senior military advisor to the President and Secretary of Defense and is legally obligated to provide "independent" military advice.[35] Joint doctrine provides the foundation for all military advice and recommendations provided by the Chairman. The joint doctrine development process provides civilian organizations with an invaluable opportunity to influence military decisionmakers at an institutional level. Military operations require both a clear process for decisionmaking and a framework for immediate employment capabilities toward mission objectives. Interorganizational differences and best practices emerge daily, and it is critical to include their perspectives into the joint doctrine revision process. Joint doctrine is not static; it is intended to be revised and adapted in accordance with vetted operational experiences. Civilian employees and military personnel benefit equally from an enhanced understanding of each other's respective roles and missions. Participation and contribution to the development of each other's doctrine or rules can assist in establishing mutual understanding, trust, and rapport.

The vast amount of interorganizational operational experiences during the last 15 years, across multiple global geographies, has clearly established and reinforced the necessity of effective interorganizational cooperation. In light of ever-increasing fiscal pressures and evolving strategic priorities, creative means must be explored that could help both civilian and military organizations maintain, enhance, and routinize cooperation in ways that can best support both sides' goals, objectives, and priorities. **JFQ**

Notes

[1] James C. McArthur et al., "Interorganizational Cooperation I of III: The Interagency Perspective," *Joint Force Quarterly* 79 (4th Quarter 2015), 106–112.

[2] James C. McArthur et al., "Interorganizational Cooperation II of III: The Humanitarian Perspective," *Joint Force Quarterly* 80 (1st Quarter 2016), 145–152.

[3] The joint force is unique in that all other Department of Defense elements support it. Throughout this article the term *joint force* is used to describe U.S. military forces.

[4] Joint Publication (JP) 3-08, *Interorganizational Coordination*, revision first draft (Washington, DC: The Joint Staff, December 10, 2014), 13. The following terms are a range of interactions that occur among stakeholders. There is no common interorganizational agreement on these terms, and other stakeholders may use them interchangeably or with varying definitions. Dictionary definitions are provided as a baseline for common understanding. Collaboration is a process where organizations work together to attain common goals by sharing knowledge, learning, and building consensus. Be aware that some attribute a negative meaning to the term *collaboration* as if referring to those who betray others by willingly assisting an enemy of one's country, especially an occupying force. *Cooperation* is the process of acting together for a common purpose or mutual benefit. It involves working in harmony, side by side, and implies an association between or among organizations. It is the alternative to working separately in competition. Cooperation with other departments and agencies does not mean giving up authority, autonomy, or becoming subordinated to the direction of others. *Coordination* is the process of organizing a complex enterprise in which numerous organizations are involved and bring their contributions together to form a coherent or efficient whole. It implies formal structures, relationships, and processes.

[5] JP 1, *Doctrine for the Armed Forces of the United States* (Washington, DC: The Joint Staff, March 25, 2013), VI-3.

[6] JP 3-07.3, *Peace Operations* (Washington, DC: The Joint Staff, August 1, 2012).

[7] Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 5120.02C, *Joint Doctrine Development System* (Washington, DC: The Joint Staff, January 13, 2012), A-2.

[8] JP 3-20, *Security Cooperation*, revision first draft (Washington, DC: The Joint Staff, February 11, 2014).

[9] CJCSI 5120.02D, *Joint Doctrine Development System* (Washington, DC: The Joint Staff, January 5, 2015), A-4.

[10] George J. Flynn, memorandum, "Way Forward for the Revision of JP 3-24, *Counterinsurgency Operations*," June 22, 2012.

[11] Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3500.03E, *Joint Training Manual for the Armed Forces of the United States* (Washington, DC: The Joint Staff, April 20, 2015), E-3.

[12] JP 1, VI-9.

[13] CJCSI 5120.01C, A-7.

[14] JP 4-02, *Health Services Support*, program directive and revision first draft (Washington, DC: The Joint Staff, 2016).

[15] Rick Rowlett et al., *Joint Force Quarterly* 77 (2nd Quarter 2015), 143–144.

[16] CJCSI 5120.01C, A-6.

[17] JP 1, VI-5.

[18] William E. Rapp, "Civil-Military Relations: The Role of Military Leaders in Strategy Making," *Parameters* 45, no. 3 (Autumn 2015), 25.

[19] *Decade of War, Volume 1: Enduring Lessons from the Past Decade of Operations* (Suffolk, VA: Joint and Coalition Operational Analysis Division [JCOA], Joint Staff J7, 2012).

[20] Ibid., v.

[21] Ibid., 2.

[22] *3D Planning Guide Diplomacy, Development, Defense: Pre-decisional Working Draft* (Washington, DC: Department of Defense, July 31, 2012), 47–55; George Katsos, "Command Relationships," *Joint Force Quarterly* 63 (4th Quarter 2011), 153–155; "Multinational Command Relationships," *Joint Force Quarterly* 65 (2nd Quarter 2011), 102–104; and "The United Nations and Intergovernmental Organization Command Relationships," *Joint Force Quarterly* 66 (3rd Quarter 2012), 97–99.

[23] David Grambo, Barrett Smith, and Richard W. Kokko, "Insights to Effective Interorganizational Coordination," *InterAgency Journal* 5, no. 3 (Fall 2014), 4–5; Bradley A. Becker, "Interorganizational Coordination," *Insights and Best Practices Focus Paper*, 4th ed. (Suffolk, VA: JCOA, Joint Staff J7, July 2013), 1; Alfonso E. Lenhardt, *USAID Policy on Cooperation with the Department of Defense* (Washington, DC: U.S. Agency for International Development, June 2015).

[24] JP 3-24, *Counterinsurgency Operations* (Washington, DC: The Joint Staff, November 22, 2013).

[25] Lenhardt.

[26] JP 3-29, *Foreign Humanitarian Assistance* (Washington, DC: The Joint Staff, January 3, 2014).

[27] JP 3-28, *Defense Support of Civil Authorities* (Washington, DC: The Joint Staff, July 31, 2013).

[28] Innovative Readiness Training Web site, available at <http://irt.defense.gov/>; Department of Defense Directive 1100.20, *Support and Services for Eligible Organizations and Activities Outside the Department of Defense* (Washington, DC: Department of Defense, April 12, 2004).

[29] CJCSI 3141.01E, *Management and Review of Joint Strategic Capabilities Plan (JSCP)—Tasked Plans* (Washington, DC: The Joint Staff, September 8, 2014), D-2.

[30] *3D Planning Guide Diplomacy, Development, Defense*.

[31] JP 3-0, *Joint Operations*, revision first draft (Washington, DC: The Joint Staff, October 8, 2014); JP 3-07, *Stability Operations*, revision first draft (Washington, DC: The Joint Staff, December 9, 2014); JP 3-08; JP 5-0, *Joint Planning*, revision first draft (Washington, DC: The Joint Staff, August 11, 2011).

[32] Chairman of the Joint Chiefs of Staff Guide 3130, *Adaptive Planning and Execution (APEX) Overview and Policy Framework* (Washington, DC: The Joint Staff, May 29, 2015).

[33] CJCSI 5120.02D; CJCSM 5120.01, *Joint Doctrine Development Process* (Washington, DC: The Joint Staff, December 29, 2014), B-1.

[34] Ibid., B-6–B-23.

[35] Janine Davidson, "The Contemporary Presidency, Civil-Military Friction and Presidential Decision Making: Explaining the Broken Dialogue," *Presidential Studies Quarterly* 43, no. 1 (March 2013), 134–137.

Seaman stands force protection watch in 7-meter rigid hull inflatable boat while amphibious transport dock ship USS *Ponce* (LPD 15) gets under way after port visit at Seychelles, November 2010 (U.S. Navy/Nathanael Miller)

Thoughts on Force Protection

By Richard E. Berkebile

One of the prime objectives of an adversary is to inflict damage on the joint force. With thinking enemies, vulnerability is an inescapable characteristic of conflict, and every joint force will have vulnerabilities. Contemporary threats transcend space far easier than in the past, and operational protection is not confined to lethal threats to formations located in hostile environments overseas. With modern technology, even *individual* Servicemembers can be targeted directly or indirectly through families or communities and by both lethal and nonlethal means. For example, in August 2015 the Islamic State of Iraq and the Levant published the names, photographs, and addresses of 100 U.S. military personnel and encouraged sympathetic individuals to attack them.[1]

Joint doctrine conceives protection in two contexts.[2] The first context is as a *function* focused on preserving the joint force's fighting potential.[3] The second is as a *mission* to protect civilians.[4] Joint Publication (JP) 1-0, *Doctrine for the Armed Forces of the United States*, states that military operations are most effective when integrated and synchronized in time, space, and purpose.[5] This article adapts that insight and analyzes the function and mission contexts of protection through the lenses of purpose, space, force, and time.

What Is Protection?

JP 3-0, *Joint Operations*, defines *protection* as the "preservation of the effectiveness and survivability of mission-related military and nonmilitary personnel, equipment, facilities, information, and infrastructure deployed or

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located within or outside the boundaries of a given operational area."[6] This definition addresses the protection function in terms of purpose, location in space, and objects to be protected. *Protecting* denotes shielding from injury, destruction, or detrimental effect, while *protection* is the act of protecting or sheltering from danger or harm.

Protection does not accomplish political or military objectives in its own right. It is defensive in nature, but not passive. It differs from defending, but the concepts are related and not mutually exclusive. In a military context, defensive operations are more often associated with the maneuver function and more fully engage the fires function. In traditional warfare, protection tends to occur at a greater distance from the source of the threat than defense.

Purpose

Protection's military application is broad. At a fundamental level, militaries exist to protect the state. For this article, however, the vast remit of protection is narrowed to two purposes. The first is protecting the joint force itself.[7] To be useful, the joint force must survive as an effective fighting force. In other words, the joint force is the *essential* object of protection. This is implied in the functional focus on preserving the joint force's fighting potential.[8]

The other purpose is to protect nonforce elements, that is, anything that is not part of the joint force. *Nonforce element* is an author-invented term aggregating mission-related nonmilitary personnel, equipment, facilities, information, and infrastructure for brevity.[9] These nonforce elements are *contingent* objects of protection. When protective capabilities are scarce, nonforce elements must be prioritized based on their value to the campaign or achieving strategic outcomes. The joint force is the primary military means to provide protection for both nonforce elements and itself. The reverse is generally not true.

JP 3-0 does not explain the phrasing "conserving the joint force's fighting potential" as opposed to just "conserving the joint force."[10] Conjecturally, this wording could refer to preservation of fighting potential as the outcome of successfully protecting the joint force.[11] More likely, however, it references the need to prioritize protection capabilities so violence can be "applied at the decisive time and place."[12] The difference between the joint force itself and its fighting potential is nuanced. Contextually, some parts of the joint force's fighting potential will matter more. While no commander wants to suffer loss of any kind, the key is to be able to absorb the enemy's blows while continuing to prosecute the campaign. A vital object of protection is the friendly operational center of gravity or its constituent critical requirements. Assuming that some part of the joint force is the center of gravity, sufficient damage to it would, by definition, severely impede or entirely derail the achieving of campaign objectives.[13]

JP 3-0 is instructive, stating that "as the JFC's [joint force commander's] mission requires, the protection function also extends beyond force protection to encompass protection of U.S. noncombatants; the forces, systems, and civil infrastructure of friendly nations; and interorganizational partners."[14] Note that broadening beyond the force is for *mission* requirements and necessarily includes nonforce elements. Protecting nonforce elements may be the object of the mission or simply a necessary factor for successfully completing another mission. JP 3-16, *Multinational Operations*, does not include the American noncombatant caveat and allows for broader protection of any noncombatant.[15]

The defense of nonforce elements should not degrade or divert the capabilities needed to *sufficiently* protect the joint force. Sufficient protection is not necessarily maximum protection. The commander must balance acceptable risk to the force and risk to the mission. The second consideration is not between the joint force and nonforce elements, but among the nonforce elements themselves. Their value is determined through analysis of the operational environment. In short, the greater the contribution to campaign success or strategic outcomes, the more valuable the element is.

Conversely, accomplishing the mission inherently involves risking at least part of the force. For example, during stability operations, interaction with people may encourage them to have confidence in their security and the legitimacy and competence of their own government primarily and an intervening power secondarily. Restricting the joint force to self-protecting operating bases is unlikely to accomplish this.

An example from the 1994 Operation *Uphold Democracy* in Haiti illustrates this point. Major General David C. Meade, USA, commander of Joint Task Force 190 (JTF 190) and the 10th Mountain Division, took a conservative approach, keeping Soldiers in protective equipment and confining them to operating bases. Brigadier General Richard W. Potter, Jr., USA, commander of Special Operations Forces/Task Force Raleigh (TF Raleigh) placed his forces in soft caps and engaged with the local population.[16] In the short term, TF Raleigh was less protected. In the long term, however, it may have gained better situational awareness and developed intelligence sources, leaving its members better protected. In contrast, JTF 190 may have been ignorant of developing threats or ceded enemies an opportunity to recruit in uncontested civil areas. Alternatively, Major General Meade, fresh from his experience in Somalia, may have considered a moderately successful enemy attack a risk to the entire operation.

In short, factors that influence the wisdom of extending protection beyond the joint force could include:

- Utility of the protected entity. Forces of friendly nations, at-risk populations, and interorganizational partners could provide critical requirements or capabilities to the joint force.
- Phase of the campaign. If the dominate phase concluded successfully and if stability is contested, then joint force survival is at less risk and may justify extending the protection function.
- Purpose of the campaign. Campaign objectives may dictate extension. For

Seaman from Riverine Squadron 1 observes members of Royal Thai navy riverine squadron conduct force protection exercise on fishing vessel and patrol boat during Cooperation Afloat Readiness and Training Thailand 2011, Sattahip, Thailand, May 2011 (U.S. Navy/Katerine Noll)

example, during Operation *Odyssey Dawn* in Libya in March 2011, the objective was to protect civilians.[17]

- Political significance of the nonforce elements. If the enemy targets noncombatants to achieve a political, or conceivably economic, effect, and if the risk to the joint force is small enough, it may require a diversion of resources. Alternatively, nonorganic military or interagency capabilities could be tasked.

Protection's Space

A common reason for protection failures is an attack on an unanticipated location or domain. It is all too easy for cracks to appear due to poor spatial analysis or faulty assignment of responsibilities. The totality of the protection problem requires disaggregating space to reveal intricate relationships among environments, areas, and domains.

JP 3-0 conceives of military operations as inhabiting a world consisting of environments, areas, domains, dimensions, and systems. Doctrine employs *operational environment* (OE) to describe the "composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander."[18] *Operational area* (OA) is an overarching and rather elastic term used to describe several different military spatial delineations of physical areas.[19] To conceive of protection across space, I considered environments to include at least some element of physical area. (Unpersuaded readers may substitute *area of interest* for operational environment for the remainder of the article.)

Conceptually, the joint force operational environment could be synonymous with the global environment. Indeed, the information environment and cyberspace domain are specifically described that way in JP 3-0.[20] The joint force is likely to focus on an OE that is a subset of the global environment. *Joint operational areas* (JOAs), or the spaces in which joint forces conduct operations, could likewise be synonymous with the operational environment. However, they are more likely to be lesser included physical spaces within it. Areas of operation are subdivisions of JOAs assigned to land and maritime components.[21] Figure 1 is a conceptual depiction of the physical volume of spatial areas.

Planning protection requires further division of environments and areas into domains, the venues for fighting. JP 3-0 divides space into physical air, land, maritime, and space *domains* and the information *environment*.[22] The information environment requires further elaboration. It contains its own cyberspace domain and physical, information,

and cognitive *dimensions*.[23] Figure 2 is a modified version of an operational environment graphic found in JP 2-01.3, *Joint Intelligence Preparation of the Operational Environment*.[24]

If one accepts that the OE is a subset of the global environment, then the information environment transcends the operational environment and is not contained by the OE, as may be inferred from figure 2. If one further overlays the joint force's requirement for protection across space, the depiction resembles figure 3.

Protection's Force

Forces execute protection. These forces may include the joint force, residual military forces, or certain civilian governmental, commercial, or private entities. The technologies of the information age have compressed space and time intervals between battlefields and political outcomes. In particular, the joint force may be vulnerable in the information environment and the cyber and space domains well beyond the JOA. As technology compresses space, the joint force becomes increasingly dependent on protection capabilities provided through coordination and cooperation rather than organic assets. Here, the question concerns the joint force and its generalized application of protection capabilities.

Capabilities. Protection can be implemented in four primary ways: active defense, passive defense, emergency management and response, and fratricide prevention.[25] JP 3-0 operationalized these in terms of tasks and key considerations—essentially expanded descriptions of the tasks. Each of these ways or tasks implies a need for a corresponding capability to accomplish it. (Doctrine does not align tasks and key considerations with any particular way.) Discounting the inevitable overlap, I reworded protection tasks and aligned them with the four ways.[26] Two key considerations that were not obviously restated tasks were included. The personnel recovery task did not align with any of the specified ways:

- Active Defense: air, space, and missile defense; protecting U.S. civilians (frequently framed as noncombatant evacuation); securing forces, bases, joint security areas, and lines of communication; and defensive countermeasures (counterdeception, counterpropaganda, and counter–improvised explosive device).
- Passive Defense: physical security; chemical, biological, radiological, and nuclear (CBRN) defense; operations security, computer network defense, information assurance, defensive electronic attack; antiterrorism; force health protection (*key consideration*);[27] and critical infrastructure protection (*key consideration*).[28]
- Emergency Management and Response: CBRN consequence management.
- Fratricide Prevention.

A close examination of the ways, tasks, and key considerations disclosed five important points. First, JP 3-0 suggests that, at least at the operational

Figure 1. Physical Volume of Spatial Areas

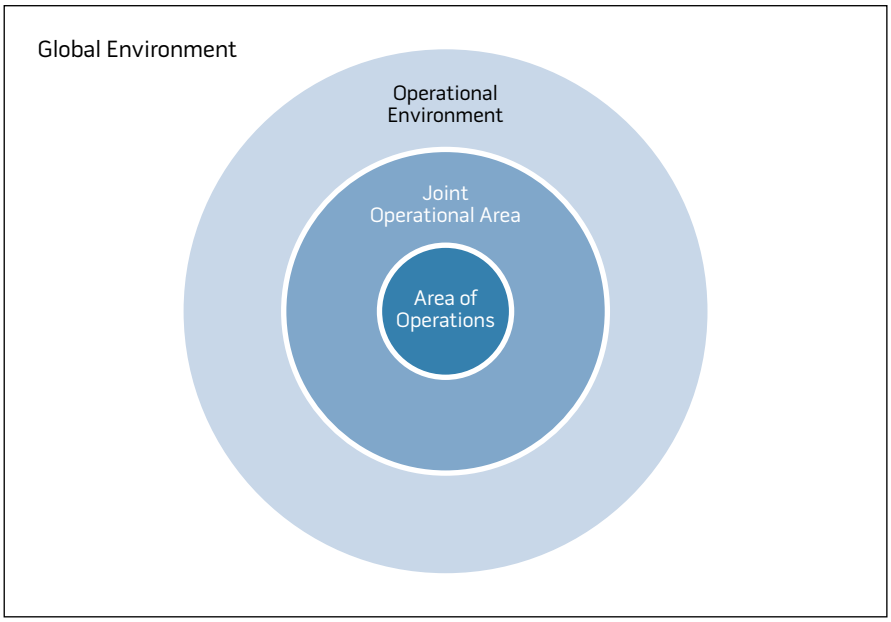


Figure 2. Operational Enviroment

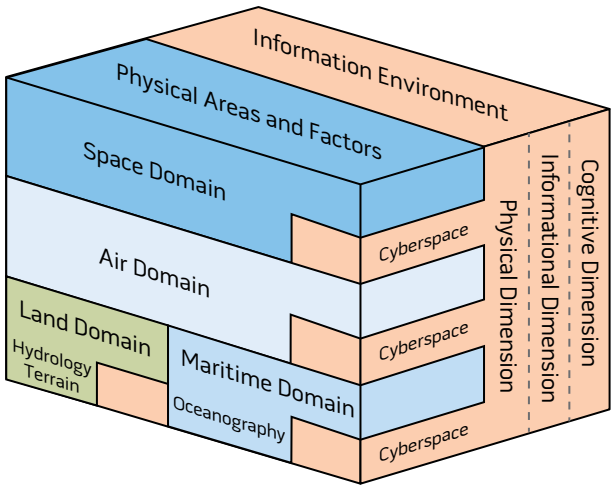
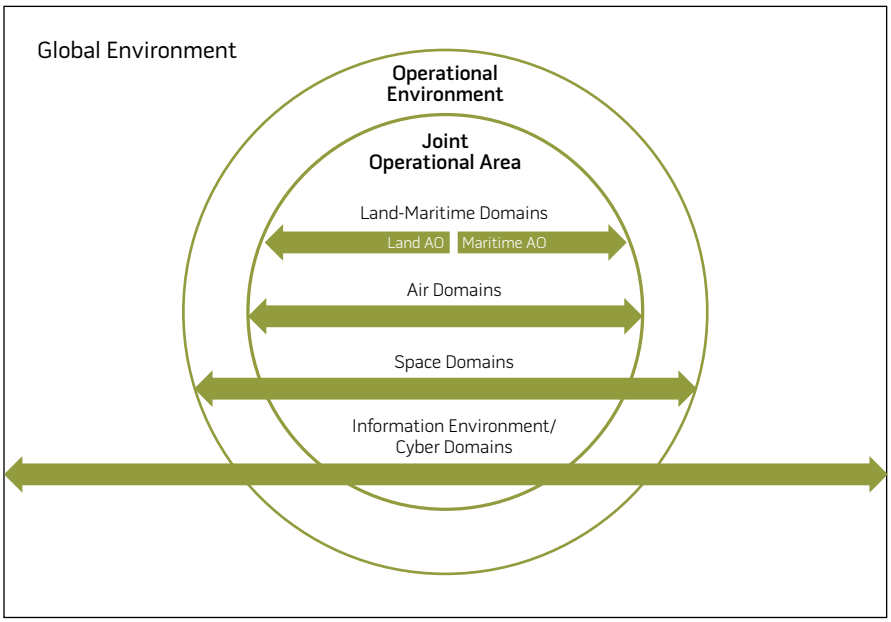


Figure 3. Requirement for Protection across Space



level, the scope of the operation is only marginally related to the range of necessary tasks.[29] This implies that a full range of protection capabilities should be both considered and available for any contingency.

Second, domains are not necessarily bounded. Some protection capabilities are executed in more than one domain, while others are executed in a single domain but provide protection in several. Both joint force and national protection capabilities and responsibilities may cross the JOA boundary. Lastly, as conditioned by proximity, protection need not secure force and nonforce elements in isolation.

The following example illustrates protection's spatial variability. Area missile defense protects targets in land, maritime, air, and possibly space and cyber domains. As headquarters, ports, air bases, and transportation hubs are often near urban areas, missile defense can protect both the joint force and nonforce elements, albeit at varying levels of efficiency. If the protection priority is high enough, the commander may divert capabilities from other missions. Military forces of higher echelons may also perform the mission. During the Southwest Asia campaign of 1990–1991, of which Operations *Desert Shield* and *Desert Storm* were a part, U.S. Patriot missile batteries were sent to defend Israeli nonforce elements, and air missions were retasked to perform Scud suppression even though Israel was neither a party to the conflict nor located in the JOA.[30]

Third, task descriptions are oriented toward the operational level of war. Only one, critical infrastructure protection, is clearly described at both an operational and a strategic level.[31] A review of the January 2015 Universal Joint Task List reveals that a form of the protection tasks is maintained across all levels of war.[32]

Fourth, JP 3-0 views emergency management and response narrowly in terms of accompanying damage from accidents, health threats, and natural disasters.[33] Emergency management and response should be expanded to include reaction to intentional hostile action. For example, I categorized CBRN consequence management, which is likely the result of *deliberate* hostility, under emergency management and response. Additionally, recovery actions in the aftermath of a conventional attack could easily be included in a redefined emergency management plan. This does not imply a lack of capability to perform emergency management and response but could achieve the same effect by creating a seam in conceiving and planning protection.

Finally, JP 3-0 is oriented toward *external* threats. Protection, however, also has a vital *internal* aspect. While fratricide prevention is internally focused, it is directed solely against unintentional harm. Contemporary technology and, arguably, political culture increase internal vulnerability to intentional or even ambient subversion. Stated differently, "we" could be a credible enemy requiring a corresponding protection task and capability. JP 3-10, *Joint Security Operations in Theater*, marks considerable progress toward addressing insider threats. While it specifically addresses such threats, it is not overarching protection doctrine. The Army supplements joint protection tasks with two additional internally focused ones: employing safety techniques and conducting law and order operations.[34]

Counteracting internal threats requires corresponding capabilities. Some could be capabilities in the traditional sense such as technical means to detect espionage. The key to internal force assurance, however, may lie buried within the information environment's informational and cognitive dimensions. Protection in these dimensions could have elements of technical capabilities, but it is more likely to require human solutions.

Vulnerabilities. Borrowing from Frederick II of Prussia, "he who defends everything defends nothing." The joint force has considerably more valuable military and nonforce assets to protect than just the friendly center of gravity. Protection prioritization across domains and the information environment will be key.

In the context of the air and missile defense task, JP 3-01, *Countering Air and Missile Threats*, directs the assembling of a critical asset list (CAL) based on three criteria: the potential target's mission criticality, its vulnerability (a determination based on susceptibility to and recoverability from attack), and the credibility of the threat.[35] A defended asset list (DAL) is then derived by the prioritized assignment of available air and missile defense capabilities.[36] JP 3-31, *Command*

CBRN defense specialist Marine radios team during joint training exercise between III Marine Expeditionary Forces CBRNE Ordnance Disposal units at Central Training Area, Camp Hansen, Okinawa, January 2016 (U.S. Marine Corps/Kelsey M. Dornfeld)

and Control for Joint Land Operations, suggests a similar method be used for the cyberspace domain.[37] The method is sensible as far as it goes. It simply needs to be applied across all domains. In other words, all domain and environment vulnerabilities require a centralized CAL and DAL process.

Protection's Time

Protection never rests. Or at least it should never rest. But *duration* is only one aspect of time, and labeling protection timeless does not end the discussion. Given vulnerabilities and capability scarcity, operational protection requires analysis of time's *simultaneity* and *timing* aspects. These aspects are influenced by level of war and by the phasing of operational campaigns. Although this article largely examines only operational war, the protection function spans all levels. Analyzing time requires a brief diversion into strategic and tactical protection.

Strategic Protection. The need for strategic protection is continuous. Milan Vego posits that strategic protection is about sources of power.[38] National power may be considered the state's ability to exercise "control over the minds and actions of other" people or states.[39] Sources of power, then, are intrinsically valuable entities whose protection is in the national interest. Their vulnerability is elevated or demoted by current global tensions, military campaigns, or enemy capabilities. Even if negligible in a particular campaign, sources of power are always at risk from potential enemies. Protection from strategic surprise is generally the result of long-term planning and is implemented at the national level. In a broader sense, strategic protection is a necessary component of strategic deterrence.

For example, the loss or sustained disruption of major urban centers, critical economic institutions or infrastructure, governance institutions, strategic military capabilities, or vital communications infrastructure would seriously affect the national psyche or quality of life and, conceivably, national survival. Sources of power would generally be outside the OE, except for homeland or U.S. Northern Command (USNORTHCOM) area of responsibility operations,[40] and the joint force would not be responsible for their protection. For example, USNORTHCOM orchestrates ballistic missile defense of the homeland. With current technology and likely threats, protection simultaneity and timing coordination is muted for strategic protection.

Tactical Protection. Tactical protection is local and largely of a self-help nature. According to Vego, it is unit and

Airmen work in Global Strategic Warning and Space Surveillance System Center at Cheyenne Mountain Air Force Station, Colorado, September 2014 (U.S. Air Force/Krystal Ardrey)

platform focused.[41] Tactical protection is an inherent command responsibility for all organizations. Even though acceptable risk may vary considerably, tactical protection should occur regardless of location in space. Tactical protection is not bounded by time, and its planning horizons are near term. Risk is higher during times of conflict but is never nonexistent. For example, attacks in the information environment and cyber domain are daily occurrences, although some international actors may be holding their most damaging capabilities in abeyance. Tactical protection is intrinsic, but units do not have equal capability to provide it across domains. Some protection capabilities must be aggregated at higher levels. For example, most units would be incapable of providing their own air or space defense.

Operational Protection. For operational protection, simultaneity and timing are essential aspects of time. Dale C. Eikmeier points out the offensive features of simultaneity: "multiple actions at the same time and appropriately synchronized pressure on multiple points . . . of an enemy's systems and/or CoG [center of gravity]."[42] Protection's simultaneity is the flip side of the coin; it is the prioritization and synchronization of capabilities to defend friendly critical vulnerabilities and decisive points across vulnerable domains and the information environment. In other words, skilled enemies are likely to plan multidomain attacks against the joint force.

Eikmeier also notes, "Timing refers to when to apply specific capabilities."[43] Protection priorities and requirements are dynamic. As campaigns unfold and the global environment impinges on the operational environment, planners must anticipate and react to change. Enemy capabilities will strengthen or weaken, and the enemy will adapt. The main effort and relative importance of friendly forces will likewise change. Variations will not affect all domains equally. Effective protection requires constant attention and adjustment over time.

Phasing is an operational tool used to synchronize and sequence timing during campaigns.[44] Vego observes that there is no operational level of war without active operations[45] and that JTFs are only temporary organizations, not permanent. This aligns Phase 0, shaping activities, with combatant commands at the strategic level of war. Even so, operational protection in some form begins in Phase 0. Generally, the onset of military operations is not a total surprise. Tensions build openly in the information

environment, leading to anticipatory behavior by both friendly and enemy forces. The operational impact of a moderately successful Phase 0 attack escalates for specialized high-demand, low-density assets and as the size of extant military forces, particularly potential joint force headquarters, shrinks.

Protection timing can be roughly illustrated using the protection doctrine's dominant narrative, in which the joint force deploys to a host nation that is threatened by or suffering depredations from a common enemy:

- In Phase 0, potential commanders are focused on protecting forces from terrorist actions and cyber threats. Commanders are not routinely charged with protection of nonforce elements. While a preemptive attack by a conventional force cannot be ruled out, commanders and protection planners must remain alert to the possibility.
- In Phase 1, the joint force performs a wider array of protection tasks than in Phase 0. Air base and sea port protection may be prioritized, as well as the protection of headquarters and troop concentrations, both in the OE and at home stations.
- In Phases 2 and 3, most or all protection tasks are performed. Personnel recovery and fratricide prevention are examples of expansion from Phase 1 tasks. Risk to the joint force is less justifiable compared to risk to some or many valuable nonforce elements. Attacks are likely in all domains and through the information environment.
- In Phase 4, nonforce elements may assume a higher protection priority even at the cost of increased risk to joint forces operating in the land domain. If counterinsurgency operations are performed and if protecting the population matters,[46] additional risk must be assumed as forces engage with civilians or train indigenous security forces. There will be less threat to the air, maritime, and space domains.
- In Phase 5, capabilities and vulnerabilities will decrease in most domains. The range of relevant tasks will narrow as forces redeploy. As in Phase 0, terrorist attacks may be a top concern.

Protection is a vital function that transcends space and time. Modern technology is increasing the reach of threats, allowing them to cross more domains in much less time. The defense community needs to think deeply about the concept of protection. A purpose, space, force, and time framework is a useful supplement to the function and mission contexts of protection doctrine. Operational protection requires comprehensive planning across operational areas, domains, and phases. It does not occur in isolation. Coordination with appropriate headquarters beyond the OE and tactical forces within the OE is necessary. **JFQ**

Notes

[1] Tom Wilson, "ISIS Releases Hit List of 100 American Military Personnel," *New York Post*, March 22, 2015.

[2] I thank an anonymous reviewer for this insight. Any mistakes interpreting or applying the insight are my own.

[3] Joint Publication (JP) 3-0, *Joint Operations* (Washington, DC: The Joint Staff, August 11, 2011), III-29, is the overarching publication. Related publications concentrating on specific force preservation tasks include JP 3-50, *Personnel Recovery* (Washington, DC: The Joint Staff, December 20, 2011); JP 3-10, *Joint Security Operations in Theater* (Washington, DC: The Joint Staff, November 13, 2014); JP 3-15.1, *Counter-Improvised Explosive Device Operations* (Washington, DC: The Joint Staff, January 9, 2012); JP 3-13.3, *Operations Security* (Washington, DC: The Joint Staff, January 4, 2012); JP 3-01, *Countering Air and Missile Threats* (Washington, DC: The Joint Staff, March 23, 2012); JP 3-41, *Chemical, Biological, Radiological, and Nuclear Consequence Management* (Washington, DC: The Joint Staff, June 21, 2012); JP 3-07.2, *Antiterrorism* (Washington, DC: The Joint Staff, November 24, 2010); JP 4-02, *Health Service Support* (Washington, DC: The Joint Staff, July 26, 2012).

[4] JP 3-07.3, *Peace Operations* (Washington, DC: The Joint Staff, August 1, 2012); JP 3-07, *Stability Operations* (Washington, DC: The Joint Staff, September 29, 2011); JP 3-22, *Foreign Internal Defense* (Washington, DC: The Joint Staff, July 12, 2010); JP 3-24, *Counterinsurgency* (Washington, DC: The Joint Staff, November 22, 2013); JP 3-28, *Defense Support of Civil Authorities* (Washington, DC: The Joint Staff, February 19, 2013); JP 3-29, *Foreign Humanitarian Assistance* (Washington, DC: The Joint Staff, January 3, 2014); JP 3-68, *Noncombatant Evacuation Operations* (Washington, DC: The Joint Staff, January 22, 2007).

[5] JP 1, *Doctrine for the Armed Forces of the United States* (Washington, DC: The Joint Staff, March 25, 2013), I-20; JP 3-0, I-1.

[6] JP 3-0 also defines protection in a space and shipping context, but including them here would not contribute to the overall thesis of the article.

[7] In the abstract, the joint force could be synonymous with the entire national military establishment. It is more likely a subset of all military forces organized in a joint task force.

[8] JP 3-0, III-29; *Protection Joint Functional Concept: Version 1.0* (Washington, DC: Department of Defense, June 3, 2004), 7.

[9] It also allows for the possibility that personnel, equipment, facilities, information, and infrastructure may not be an exhaustive list.

[10] See Universal Joint Task List, available at <www.dtic.mil/doctrine/training/ujtl_tasks.pdf>.

[11] *Protection Joint Functional Concept.*

[12] JP 3-0, III-30.

[13] JP 5-0, *Joint Operation Planning* (Washington, DC: The Joint Staff, August 11, 2011), III-22–23.

[14] JP 3-0, III-29.

[15] JP 3-16, *Multinational Operations* (Washington, DC: The Joint Staff, July 16, 2013), III-11.

[16] Walter E. Kretchik, Robert F. Baumann, and John T. Fishel, *Invasion, Intervention, "Intervasion": A Concise History of the U.S. Army in Operation Uphold Democracy* (Fort Leavenworth, KS: U.S. Army Command and General Staff College Press, 1998).

[17] Jim O'Sullivan and Tom Madigan, "Mullen: Qaddafi Could Still Stay in Power," *National Journal*, March 20, 2011.

[18] JP 3-0.

[19] Ibid., IV-1.

[20] Ibid., IV-2.

[21] Ibid., IV-13.

[22] Milan Vego, *Joint Operational Warfare: Theory and Practice* (Newport, RI: U.S. Naval War College Press, 2009), III-65–72. Vego presents an excellent discussion of whether the information environment is an additional element of the time, space, and purpose construct.

[23] JP 2-01.3, *Joint Intelligence Preparation of the Operational Environment* (Washington, DC: The Joint Staff, June 16, 2009), II-27.

[24] JP 2-01.3, *Joint Intelligence Preparation of the Operational Environment* (Washington, DC: The Joint Staff, May 21, 2014), I-3.

[25] JP 3-0.

[26] Ibid., III-30.

[27] Ibid., III-34.
[28] Ibid.
[29] Ibid., III-30.
[30] The 1993 version of JP 3-0 uses the term *joint operations area*. It is unclear if the term was used in 1990–1991.
[31] JP 3-0, III-34.
[32] Universal Joint Task List.
[33] JP 3-0, III-29.
[34] Army Doctrine Reference Publication 3-37, *Protection* (Washington, DC: Headquarters Department of the Army, August 2012), 1–3.
[35] JP 3-68, III-20.
[36] Ibid., III-21.
[37] JP 3-31, *Command and Control for Joint Land Operations* (Washington, DC: The Joint Staff, February 24, 2014), II-21.
[38] Adopted from Vego, VIII-95.
[39] Hans Morgenthau, *Politics Among Nations: The Struggle for Power and Peace*, 4th ed. (Caledonia: McGraw-Hill, 1967), 26.
[40] Doctrine defines *homeland* as the United States, its territories, and the surrounding waters and airspace (JP 3-16, I-2). This includes Guam. For this article, references to the homeland exclude Guam but include Puerto Rico and the Virgin Islands. Hawaii is part of the homeland but is in the U.S. Pacific Command area of operation (except for missile defense).
[41] Vego, VIII-96–97.
[42] Dale C. Eikmeier, "From Operational Art to Operational Plans: A Joint Planning Primer," Fort Leavenworth, KS, 2012, 44; JP 3-0.
[43] Eikmeier, 45.
[44] JP 3-0, III-36.
[45] Vego, VIII-95.
[46] Field Manual 3-24/Marine Corps Warfighting Publication 3-33.5, *Insurgencies and Countering Insurgencies* (Washington, DC: Headquarters Department of the Army, May 13, 2014).

Joint Publications (JPs) Under Revision (to be signed within 6 months)

JP 1-0, *Joint Personnel Support*

JP 1-04, *Legal Support to Military Operations*

JP 1-06, *Financial Management Support in Joint Operations*

JP 2-01.2, *Counterintelligence/Human Intelligence*

JP 2-03, *Geospatial Intelligence in Joint Operations*

JP 3-03, *Joint Interdiction*

JP 3-07, *Stability*

JP 3-08, *Interorganizational Coordination*

JP 3-41, *CBRN Consequence Management*

JP 3-42, *Joint Explosive Ordinance Disposal*

JP 4-01.2, *Sealift Support to Joint Operations*

JP 4-01.5, *Joint Terminal Operations*

JP 4-01.6, *Joint Logistics Over-the-Shore*

JP 4-03, *Joint Bulk Petroleum and Water*

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JP 3-13.3, *Operations Security*

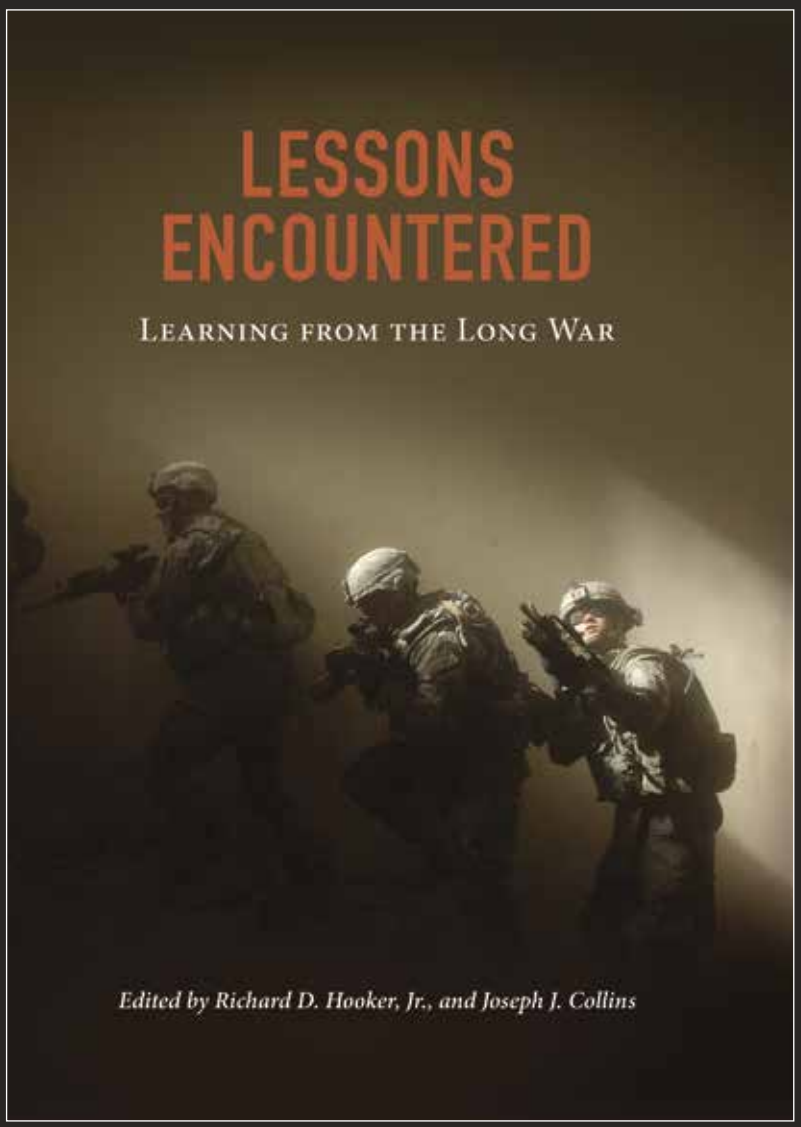
JP 3-14, *Space Operations*

JP 3-34, *Engineer Operations*

JP 3-50, *Personnel Recovery*

JP 3-61, *Public Affairs*

JP 3-68, *Noncombatant Evacuation Operations*



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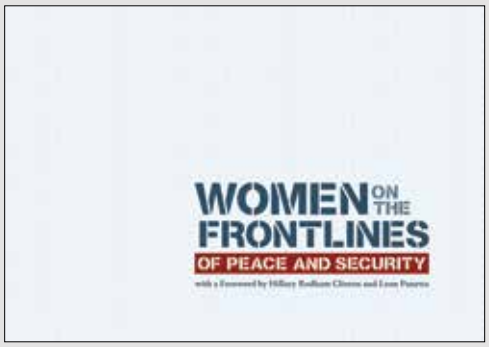

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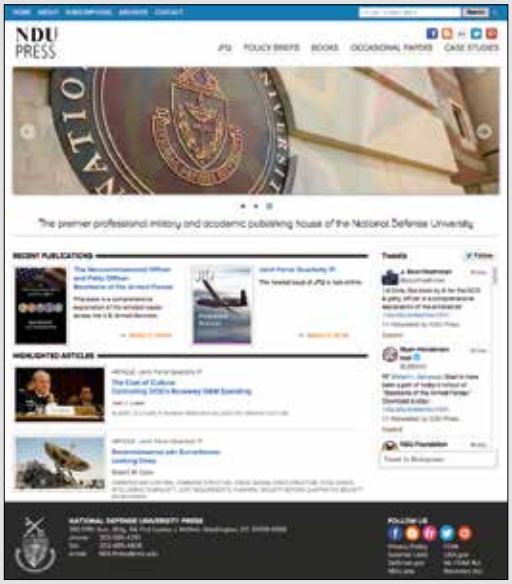

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