



JFQ

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Questioning Doctrine

An Interview with
Joseph L. Lengyel

2017 Essay
Competition Winners

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Cover 2 images (top to bottom): Sailor assigned to USS Jacksonville proposes during homecoming arrival at Joint Base Pearl Harbor–Hickam, August 2017 (U.S. Navy/Katarzyna Kobiljak); Marine Captain Kelsey Casey, assigned to “Tomcats” of Marine Attack Squadron 311, speaks to AV-8B Harrier maintainers on flight deck of USS Bonhomme Richard during certification exercise, August 2017 (U.S. Navy/Jeanette Mullinax); Air traffic control journeyman (right) and air traffic control tower watch supervisor give direction to inbound aircraft, June 2017, Joint Base Elmendorf-Richardson, Alaska (U.S. Air Force/Westin Warburton)



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Joint Force Quarterly is published by the National Defense University Press for the Chairman of the Joint Chiefs of Staff. *JFQ* is the Chairman's flagship joint military and security studies journal designed to inform members of the U.S. Armed Forces, allies, and other partners on joint and integrated operations; national security policy and strategy; efforts to combat terrorism; homeland security; and developments in training and joint professional military education to transform America's military and security apparatus to meet tomorrow's challenges better while protecting freedom today. All published articles have been vetted through a peer-review process and cleared by the Defense Office of Prepublication and Security Review.

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To the Editor



**General Colin L. Powell, USA (Retired)
909 North Washington Street
Alexandria, Virginia 22314
June 5, 2017**

Dear Colonel Eliason:

I enjoyed your Executive Summary in the recent issue of JFQ that described the beginnings of JFQ. I congratulate everyone who has worked on the magazine since its birth. I am proud of what they have accomplished.

Allow me to flesh out the back story a little more. As CJCS I used to read and admire all the Service magazines---ARMY, Proceedings, Air Force and the Marine Corps Gazette. Although they were correctly parochial they let me keep my finger on the pulse of the Joint Force. But then shouldn't the Joint Force have a magazine? Lt. Gen Jack Cushman, USA, also thought so and encouraged me.

I called in VADM Jack Baldwin, NDU President and an old friend. I told him I wanted a magazine that took the best stylistic features of the Service magazines. I wanted controversy, original writing, debate, an edge and Joint Force parochialism. I asked for a plan in a matter of weeks. Dr. Al Bernstein was the head of INSS at the time. They brought in a mockup a few weeks later. We tweaked it a bit and shortened the proposed title to JFQ. The team did a great job.

The magazine captured the message I had written as 1991 as the foreword for Joint Pub 1, "Joint Warfare of the Armed Forces," shown below.

A handwritten signature in black ink, appearing to read 'C. L. Powell', located at the bottom right of the letter's content area.



THE CHAIRMAN, JOINT CHIEFS OF STAFF
WASHINGTON, DC 20318

11 November 1991

MESSAGE FROM THE CHAIRMAN

Joint Warfare is Team Warfare

When a team takes to the field, individual specialists come together to achieve a team win. All players try to do their very best because every other player, the team, and the home town are counting on them to win.

So it is when the Armed Forces of the United States go to war. We must win every time.

Every soldier must take the battlefield believing his or her unit is the best in the world.

Every pilot must take off believing there is no one better in the sky.

Every sailor standing watch must believe there is no better ship at sea.

Every Marine must hit the beach believing that there are no better infantrymen in the world.

But they all must also believe that they are part of a team, a joint team, that fights together to win.

This is our history, this is our tradition, this is our future.

A handwritten signature in black ink, appearing to read "C. L. Powell".

COLIN L. POWELL
Chairman
Joint Chiefs of Staff



General Dunford meets with Japan Self-Defense Force Admiral Katsutoshi Kawano, Chief of Staff, Joint Staff, at Ministry of Defense in Tokyo, August 18, 2017 (DOD/Dominique A. Pineiro)

Allies and Partners Are Our Strategic Center of Gravity

This August, I was in the Pacific to consult with our South Korean and Japanese allies about the threat from North Korea. In September, I was in Europe for the 178th North Atlantic Treaty Organization (NATO) Military Committee in Chiefs of Defense Session. In these meetings, as in all my interactions with senior political and military leaders around the world over the last 2 years, one thing was abundantly clear: The United States is widely considered to be an indispensable nation, critical to the maintenance of the international order that has brought us and our allies relative peace and extraordinary economic prosperity since World War II.

While U.S. global leadership is the product of much more than our military capabilities, the competitive military advantage we possess is vital to our national power and the role we play on the world stage. A primary enabler of that competitive advantage is our worldwide network of allies and partners that has developed since World War II. That is why the National Military Strategy, published last year, identifies the network of U.S. alliances and partnerships as our strategic center of gravity.

That is not just a diplomatic platitude—it's doctrinally sound. According to Joint Publication 5-0, *Joint Planning*, the *center of gravity* is the source of power that provides moral or physical

strength, freedom of action, or will to act. At the strategic level, our network of alliances and partnerships does just this. At the operational level, our center of gravity is the ability to project power when and where necessary to advance national interests; that power projection is enabled by allies and partners. Both strategically and operationally, then, allies and partners underpin the Joint Force's ability to execute the National Military Strategy.

Allies are nations with whom we have formal defense agreements for broad, long-term objectives. These can be bilateral—as with Japan, South Korea, and the Philippines—or multilateral, like those that include Australia, New Zealand, and Thailand in the Pacific, and our 28 Allies

in NATO. Partnerships are structured around narrower objectives and may be less enduring, but they are no less vital. In every case, these relationships are based on common interests and common purpose.

At the strategic level, alliances and partnerships serve to enhance legitimacy, improve deterrent capability, and expand our access. Coalitions enhance our legitimacy by demonstrating unity of purpose in the international community. We attract allies and partners when we use our military power to defend a rules-based international order; the coalitions themselves then stand as evidence that our objectives are greater than our narrow self-interest. This unity of purpose also increases our deterrent capacity by demonstrating to potential adversaries that any aggression will be countered not only by the United States, but also by a coalition. And allies and partners expand our reach by providing access to air and sea ports, guaranteeing transit rights and allowing the forward positioning of both manpower and materiel.

Operationally, this access allows the Joint Force to rapidly and flexibly project power across the globe, effectively cheating time and space. In a fight-tonight world of transregional, multifunctional, and all-domain threats, this advantage cannot be overstated. Because our allies and partners live where we do not, they can deepen our intelligence, increase situational awareness, and provide the cultural acuity we lack. Standing alliances like NATO also provide ready-made command and control structures that expedite the formation of broader coalitions and enable enduring mission support. And, critically, coalition members increase available combat power: whether they contribute maneuver units or niche-enabling capabilities, allies and partners share the burden and make us more effective.

These benefits are not hypothetical—they are key to how we have operated for the last 70 years and how we are operating around the globe, across the range of military operations today. After the attacks on the Nation on September 11, 2001, NATO invoked the collective

defense provision in Article 5 for the first time and, in its first operation outside of Europe, immediately brought the strength of the Alliance to bear against al Qaeda. Sixteen years later, NATO is still leading Operation *Resolute Support* in Afghanistan, where 39 nations are contributing more than 13,000 troops.

Today, we are taking the same partnered approach to defeating the Islamic State of Iraq and Syria: we rapidly assembled a coalition that now stands at 69 nations, 28 of whom are contributing troops in Iraq and Syria. Progress there has been substantial and sustainable, even with a modest U.S. footprint. Bilateral relationships are equally key to other challenges around the globe; at the high-intensity end of the spectrum, our planning for military options on the Korean Peninsula would be vastly more difficult without the contributions of our Japanese and South Korean allies. And it is the strength of those alliances that have deterred conflict thus far, contributing to decades of stability and prosperity in the Pacific.

As effective as our network is, we should always strive to make it better. The changing character of war in the 21st century demands a networked response from like-minded allies and partners across the globe, from intelligence-sharing through planning and execution.

A fundamental step in expanding and empowering the network is improving information and intelligence-sharing. This is true across the range of military operations, but especially in the fight against violent extremist organizations; it takes a network to defeat a network. Within this network, we need to cultivate a bias for sharing. Shared intelligence leads to shared awareness that informs plans. If we want our allies to fight with us, we should invite them to plan with us from the start. That requires transparency at all levels, in every phase of operations.

In the execution phase, interoperability is the key to coalition operations. We must continue to pursue technological interoperability with our allies at all levels, from the strategic to the tactical. Just as important, we need to enhance the human dimension of interoperability

through combined exercises that test shared doctrine and refine operating concepts so we can fight seamlessly with our allies. Above all, Joint Force leaders at all levels must ensure that our military-to-military engagements are nested with globally integrated strategies and campaign plans that protect and strengthen our strategic and operational centers of gravity.

Since World War II, the U.S. military has maintained a competitive advantage thanks in large part to our network of allies and partners. Today, we fight side-by-side with our allies and partners in the Middle East, and we stand shoulder-to-shoulder with allies in Europe and the Pacific. Given the nature of the threats we face today and the challenges we are likely to face in the future, I cannot imagine a scenario in which the United States would not be standing alongside allies and partners across the globe. JFQ

GENERAL JOSEPH F. DUNFORD, JR.
Chairman of the Joint Chiefs of Staff





On December 7, 1991, General Powell, then Chairman of the Joint Chiefs of Staff, salutes during Sunset Ceremony for Pearl Harbor survivors at Arizona Memorial Visitors Center (DOD/Gloria Montgomery)

Executive Summary

All of us would like direct feedback on how we are performing our missions. We hope that someone would reach out to let us know our hard work is meaningful and respected. Usually, however, we continue our work without direct encouragement, hoping it will have the impact we want to achieve.

I am fortunate to have recently received feedback directly from the founder of *Joint Force Quarterly* and internationally renowned four-star general and statesman, General Colin Powell. During this surprise communication, we discussed *JFQ*'s history and impact, including the journal's role in promoting jointness itself. General Powell's comments validated my own feelings about the value of *JFQ* in the

joint environment. He made it clear that the journal has been a great success, and it needs to continue its mission. He reiterated something I already know: the quality of our work is exceptional and the message promoting jointness is being heard. His final comments were "Job well done. Carry on the mission."

General Powell passed on two items that are included in this issue. The first is a letter containing some additional detail about the founding of the journal—a topic that was previously covered in the *JFQ* 83 Executive Summary. Accompanying this letter is his note to the joint force in 1991, summarizing his views on joint warfighting.

We continue our tradition of excellence in this issue. In the Forum, the next installment in our series of interviews

with senior officers features the 28th Chief of the National Guard Bureau, General Joseph L. Lengyel, USAF. He discusses the implications of gaining a seat at the table with the other joint chiefs. In his accompanying article, he elaborates on how the Guard is building on its achievements while enhancing its reputation as an operational reserve for the joint force. James M. Davitch next discusses how the wealth of unclassified data could be a valuable resource and what would be the best way to use it. Thomas Ayres provides us with a review of the law of war in cities, as some have questioned the legality of fighting in the urban environment—especially in current conflicts in which war has caused a great deal of destruction. Jeffrey Miller and Ian Corey lastly investigate how nonstate actors are able to fund their

operations and suggest ways to target these activities.

JFQ next presents the winning essays from the 11th annual Secretary of Defense and 36th annual Chairman of the Joint Chiefs of Staff Essay Competitions, held here at National Defense University, in May 2017. Twenty-seven senior faculty members from 14 participating professional military education institutions served as judges to determine the best student entries among the three categories. The Secretary of Defense National Security Essay winner, Travis W. Reznik, examines the need for a new authorization of the use of military force, as the current authorization dates back to the immediate post-9/11 period. Lieutenant Colonel Benjamin Ray Ogden, USA, won the Chairman of the Joint Chiefs of Staff Strategic Research Paper competition with his discussion of significant gaps in how we develop officers in military service. Nathaniel Kahler won the Chairman's Strategy Article competition by examining the Bashar al-Asad regime and its control of Syria in the long term. Details of next year's competitions can be found on the NDU Press Web site under "Essay Competitions." We look forward to another year of exceptional entries.

In Commentary, we take a look at toxic leadership, global health engagement, and the Human Terrain System program. National Defense University's chaplain, Kenneth Williams, offers a glimpse into toxic culture in the U.S. military and suggests remedies. Adding to our robust coverage of global health engagement, Bertram C. Providence, Derek Licina, and Andrew Leindecker discuss how we can best increase the capacity of our partner nations to deal with health issues. Brian R. Price then assesses the record of the controversial Human Terrain System program and offers recommendations on how it could be employed in future conflicts.

Our Features section includes three interesting pieces—one resurrects an old argument, and two tackle issues that are long overdue for discussion by the joint force. First, George C. McCarthy addresses the topic of how large our general and flag officer force should be by



General Powell speaks with General Dunford before National Memorial Day Concert at West Lawn of U.S. Capitol, May 28, 2017 (DOD/Dominique A. Pineiro)

suggesting we consider proportionality over concerns of other justifications. On the command and control front, Michael G. Kamas, David W. Pope, and Ryan N. Propst, using U.S. Africa Command as an example, explore options to reorganize the internal workings of the combatant commands offered in the 2017 National Defense Authorization Act. Audrey M. Schaffer discusses how norms can shape our views of protection and defense above our atmosphere as the military begins to consider the idea of an independent space force here on Earth.

Our Recall section boasts another great mixture of thought and history by our long-time contributor Phillip S. Meilinger, who offers us the opportunity to consider the impact of timing in war.

Accompanying three book reviews, our Joint Doctrine section comprises three important issues: robots, food security, and joint planning. In many popular movies and defense writings, we are warned that robots could potentially take over the practice of warfighting, a subject Jules Hurst will help us understand better as we seek doctrine to guide us on this topic. George E. Katsos discusses how the U.S. Government deals with food security as it relates to campaign planning. For many *JFQ* readers,

the arrival of a revised Joint Publication such as the JP 5-0, *Joint Planning*, is a much-anticipated event. Steve Townsend provides us with important updates to the joint planners "bible." As always, we round out the issue with the latest Joint Doctrine Update.

In the fall of 2018, we will observe the 25th anniversary of the inaugural edition of *Joint Force Quarterly*. We would like to extend an invitation to all the friends of the journal. Watch this space and our Web site for details as we develop this event celebrating "the lively interplay among some of the finest minds committed to the profession of arms," as General Powell stated. In the meantime, keep thinking about the joint force, and write to us with your best ideas. *JFQ*

WILLIAM T. ELIASON
Editor in Chief



have watched the Guard mature from a good, solid, and competent contributor to one now that is able to deploy anywhere in the world immediately with our Active component joint force partners. We can play any role that we are asked to play; we have the capacity as a Guard Force contributor to do that.

There is nothing like 16 years of continuous combat to put discipline into the training process. Everything stems from the responsibility to come when the Nation needs us. I know that the current discussion is on readiness, and we want a ready force, but as a Reserve component, I am not disappointed with where we are. We are an operational force that regularly and routinely contributes to warfighting. Consequently, I am sitting in this seat, probably with the best relationship I have ever witnessed between the Reserve component (in my case, the National Guard) and the Army and the Air Force. Because the Army and the Air Force get so much value from the Guard—which to them is real combat capability when they want it, when they need it, when they plan for it—they are willing to invest in us and give us upgraded equipment and bring us to training and develop our leaders and give us assignments that broaden and develop the senior leaders of the Army and Air National Guard. Currently, about 18,000 people are mobilized on average by the Guard, down from 60,000 or 70,000 mobilized 10 years ago.

The homeland priority is uniquely ours, and when bad things happen, everybody contributes to fixing the problem; we think about it, we plan for it. We are where things happen—we are at the local and state levels where things get solved for domestic consequence management, whether it is storm-driven, natural disaster-driven, or imposed on us by some bad actor. Whether it's cyber or bombs in Boston at the marathon, we are uniquely postured, present, and connected to make a real impact on whatever might be happening.

The partnership priority is new and emerging and tied to warfighting and the homeland. Our relationships continue to grow, with currently 80 partner countries. With Malaysia, for example,

An Interview with Joseph L. Lengyel

JFQ: When you became chief of the National Guard Bureau, you stated that your focus would be on three priorities:

warfighting, homeland security, and partnerships. What is your assessment of how well the Guard is meeting these priorities?

General Joseph L. Lengyel, USAF, serves as the 28th Chief of the National Guard Bureau and as a Member of the Joint Chiefs of Staff.

General Joseph L. Lengyel: I have never seen a more capable organization that does those kinds of things in our business model. As for the warfighting priority, I

we just signed the newest partnership with our state partner piece and have a strategic impact well beyond what I think people envisioned. When you look at the relationships and the trust that it builds, you realize that the program is morphing from “Hey, go make friends, build trust, work for interoperability” to real employment and training.

JFQ: It is a far different world than when you joined.

General Lengyel: Absolutely. I joined a unit that was good, but now it is every bit as, and should be expected to be, ready, capable, and competent as an Active component unit.

JFQ: Given the Chairman’s stated security challenges, the so-called four plus one, how is the Guard preparing and sustaining its units to meet the requirements of warfighting after 16 years of war?

General Lengyel: When I testified before Congress, Representative [C.A. Dutch] Ruppberger [III (D-MD)] asked me, “The National Guard is in the Baltics. What do you think the Russians see when they look across and see the National Guard?” I replied, “Sir, I do not think they see the National Guard; I think they look across and see the United States Army.” And that’s exactly the way it should be. We have ascended to a place where there is one standard for training, and we meet it and deploy in it. When we look at the full array of threats, and there are many, the “four plus one” are the *named* threats, but those are an umbrella under which all the other nations that we interact with, protect, and build partnerships with are present. In a four-plus-one world, problems are not regional, they are global. Problems are not restricted to any one domain, they are multidomain. Problems are multifunctional as we engage with them. The National Guard is just plugged in at every level throughout the spectrum of threats. What I am learning and watching is how the character of war is changing. It is true. Who would

have imagined the impact of cyber and space on the battlefield and how we need to play in that arena and be there as part of the joint force? We are evolving, just like everybody else.

JFQ: How do you see these threats affecting U.S. security domestically and the role of the Guard in defending the homeland?

General Lengyel: As I mentioned earlier, we plan for things happening on the home front. For the first time in a long while, we look at our nation as vulnerable to external threats. We’re vulnerable to some degree to some near-peer state actors who would want and could do us harm. We have to be ready for that. Moreover, internal threats—transnational criminal organizations, counterdrug threats, terrorism—are all things our nation has to be ready to face as well. The National Guard is, first of all, unique in that it is present in every area of our nation.

Wherever anything bad is happening, we will be there. When there is some requirement for a local sovereign state to deal with, that state can call us to augment the organic response. We bring what the Department of Defense brings. We bring mass, training, leadership, organization, communications; we bring all of our essential capabilities to help us deal with it. We are, in a sense, more vulnerable than we used to be, but we are better prepared. We learned a lot over the years on how to deal with consequence management through the national response framework. But we are more plugged in on the [intelligence] side, the interagency side, the network side to help maintain the national security piece of homeland security.

JFQ: How has the elevation of the chief of the National Guard Bureau to being a full member of the Joint Chiefs of Staff affected the Guard? Has it helped you balance the competing needs of the states of the Active force because that tension has always been there?

General Lengyel: Yes, that tension has always been there, but I feel fully integrated. As any other member of the Joint Chiefs, I am empowered to give my opinion, to engage and interact in every conceivable event in the building as a member. My ability to tell the Guard story is stronger. I often ask how I can bring value as a senior Service leader who is outside the specific reins of the Army and the Air Force. The thing that I think about a lot, maybe more than others, is homeland response. It is the dual-use piece, and it is the connection with America that is uniquely National Guard. The same question was asked of me by one of the Members on the Hill. I said that in the Pentagon I am treated like any other Joint Chief, but when you have folks up here to give testimony, I was wondering why you didn’t include me. You had the other folks up here, and I thought that’s okay if you want to talk Title 10 and specific Service topics. But when you start asking the Services about specific National Guard questions, it’s something that I would think you’re paying me to answer. But in the end, I think it’s more omission than commission. For a long time, there was no discernible difference between somebody saying, “We’re going to have the [Joint Chiefs] come together and we’re going to have the Service chiefs come together.” That is a big difference. Who are you talking to? The Joint Chiefs? The broad perspective? Or are you talking about the specific Service lanes of Title 10 organization, equip, and train?

JFQ: How would you characterize your relationship with the combatant commanders?

General Lengyel: I am chartered to have a specific and direct relationship with each of the combatant commanders. We do provide things to combatant commanders in Title 32 status; that means while we’re in our state, nonmobilized status, we’re able to do some things that facilitate our training and enhance the mission for the combatant commanders. One thing we have is a process called the



North Carolina Army National Guardsmen from C Company, 1st Battalion, 252nd Armored Regiment, prepare for next event in General Gordon Sullivan Cup Best Tank Crew Competition, May 2, 2016, at Fort Benning, Georgia (U.S. Army/Jon Soucy)

Federated [Intelligence] Program. Some of our targeting and intelligence units, as they come in and train, have learned to reorient to intelligence work for some of the combatant commanders. Providing targeting information to commanders has enhanced the mission while we are training in state status. All the combatant commanders have come to rely on the state partnership program, and they want more of it. They do all the right things to make sure that these partnership programs are well aligned with their commands, goals, and strategic objectives. They know what the states are doing when we are there, and they know what the host nations and partner nations are doing when they are here.

JFQ: As you have mentioned, the National Guard has a long-established relationship with the Army and the Air Force, but now you have the Marines and the Navy sitting

at the same table with you, and they may or may not have had a direct relationship with you, or even a reason to talk to you, in the past. What kind of new opportunities for joint operations and projects have appeared across the Services for the Guard?

General Lengyel: Because of our evolution as this operational force, we do a lot of training now. For instance, the Marine Corps comes to exercises at Camp Grayling in Michigan. There is a great exercise called Northern Strike. It is a joint certified exercise run by the Guard. Last year, we brought hundreds of Marines to participate in this exercise. They have live-fire air exercises, Army infantry on the ground and Marines on the ground—I mean *collaborative* training. It was predominantly Reserve component training last year, but it's an ever-growing thing. Interactions with the commandant of the Marine Corps have been great, and for me to get a better understanding of

how we can support all the Services helps us interact together. Maybe one day I will have the Marine Corps in a joint billet on the National Guard staff.

JFQ: How have the states reacted to the National Guard's more global viewpoint? The states are understandably more concerned with their National Guard members being around to help with a natural disaster, for instance, but you might have them in Bosnia or some other place. How does that balance work?

General Lengyel: The National Guard has changed, and it has changed forever. The days of “39 days a year” are no longer the standard. What we owe National Guard and Reserve component members is important, and we have to realize that it is a different business model. These people do have two lives, so the business model fails if we can no longer

train and be ready for the warfighting mission while we sustain and get the preponderance of our compensation from some other source. We have an array of talented people with civilian experiences in nonrelated military jobs. I have people who are accountants who want to be an artillery battery commander. I like to tell this story to illustrate: The best tank crew at the Sullivan Cup was a National Guard crew from the North Carolina Army National Guard. It was made up of a college student, a police officer, and a truck driver—and the tank commander was an insurance adjuster. This guy could blow up your house and come settle the claim!

JFQ: Can you discuss the efforts that are under way to make sure that Guard members are receiving equal benefits to the Active-duty force?

General Lengyel: That is a hugely important issue. I just got back from a trip visiting the transfer of authority in the Sinai Peninsula. The multinational force is an observer mission that has largely been supported by the National Guard force structure for a while. It is an ongoing journey to assure that the pay status, entitlements, and benefits are commensurate with the duty one is doing. While we need to keep a flexible training process and plan available and pay status to allow people to move and work around their civilian lives, we need to make sure that when we have a helicopter and it's got seven people from two different Services in it, if tragedy happens and they crash and perish, that they all get the same kinds of benefits and entitlements for their families—and for members going forward. There's been a realization that the 820,000 people in the Reserve component deserve a standardization of benefits and entitlements, so that when they deploy, they are entitled to post-9/11 GI benefits and medical care, all the things that their counterparts next to them, who happen to be Active-component Soldiers, Marines, Sailors, or Airmen, get, which the country has committed.

JFQ: How long do you think it will take to reach compensation and benefit equity for the Reserve forces?

General Lengyel: Big kudos are owed to OSD [the Office of the Secretary of Defense], the Services, and Reserve components, and the Hill for coming together and realizing that all of these statuses in the Reserve component were kind of created one at a time, and they were created kind of “Okay, we only have this much money, so how do we build it within the budget constraints that we have?” The current timelines that people talk about are 2 to 6 years to undo the legislation and align this stuff. The key is that we have to stay committed to it and focused to it—fix the big ones first and the little ones later. The current mobilization authority that is given to the two Service secretaries, [Title 10, U.S. Code] 12304b, is one way the Service secretary can deploy you in a predictable fashion to a named exercise in a unit-based construct that you then get the same kinds of pay and benefits that you would get under Presidential or voluntary mobilization. I think those can be done pretty quickly. We have to find the money to fix it. We have to just make it right and then the fallout is whatever the fallout is; we have to adjust it. Some of the other ones may be harder. It's not going to happen overnight, but I think a decade is a reasonable term to fix it.

JFQ: Why is the National Guard interested in remaining an operational reserve, and to that, what efforts will be required to stay at that level of capability that you gained over the last 16 years?

General Lengyel: I think the biggest reason we should stay an operational reserve is that it is good for the country. We provide real combat capability and have the ability to surge quickly. The second reason is almost everything works better with the Services when we are an operational reserve. When the Services are using us, when we are deploying, when we are taking on a real-world mission, the relationships with the Services work better, and we get new equipment, training, and we train together. The Services build an understanding and a trust with us, so they

know what they're getting when we show up—whether it's at an exercise or whether we show up at an operation. They say, “I know that commander, I know that leader, I know that force, they are just like us,” and off we go. When we're an operational force, those things work together.

JFQ: Many conflict zones are nontraditional and labeling them has become a popular industry with names such as “gray zones,” “asymmetrical warfare,” and “competition short of war.” What role does the Guard play in these environments, and can you gauge the demand signal for these efforts going forward?

General Lengyel: That's what the job is—to figure out what you need the military to be able to do. As we look across the character of warfare and the threats that we might face, obviously it's not as simple as it once was during the Cold War where we were going to have to fight those guys or these guys. Now we are going to have to fight nonstate actors, we are going to have to fight differently because we have been a victim of our own success. The U.S. military became one that you would have to be crazy to want to engage, so you have to compete in such a way that you don't engage that big, massive, well-equipped, and technologically superior force. The Guard plays in it as part of the Air Force, part of the Army, and part of the joint force. That's one way we play in it.

The other way we play is that events happen and we shape the environment through our engagements around the world. We have partnerships in 80 countries with regular and routine interactions annually where people get to know each other and trust each other. We get to understand the threat, we get to understand each other, we get to build partnerships and commitments that support our alliances. Any future military force will have to be flexible, adaptable, and agile. The Guard brings another unique piece to the joint force. Wherever we go, we bring our civilian skill sets that we plug in and now it's not military to military, it is American to Latvian, it is real civilian



Arkansas National Guardsman completes confidence course of 2017 Army National Guard Best Warrior Competition, July 18, 2017, at Camp Ripley Training Center, Minnesota (Minnesota National Guard/Paul Santikko)

skill sets because these are bankers and doctors and lawyers and teachers and policemen. We bring all of those skill sets when we go. It helps us deal with the full range of threats.

JFQ: How do your experiences, particularly your time in Egypt, help you understand how to best position the Guard to contribute to partnership approaches both here and around the world?

General Lengyel: My part in Egypt was kind of an out-of-the-box experience for me. It is one that I never foresaw, but it gave me a window into the political-military development that I had never expected to get. As with anything, you realize the importance of relationships. I just went over to Egypt to visit some of my old friends when I went to visit the troops over there. I saw that I still had a connection with these folks from having been there and having worked with the Egyptians. If I learned anything, it was

not about the money or force structure; it was about the relationship. The Guard is good at building relationships. I do not have a command and control relationship with the 54 adjutants-general in the 450,000. I am not a commander of them, so by nature, we collegially operate, we convince, we cajole, we discern which way we are going, and in kind of a collective body, we go that way. I think working in Egypt helped me see a lot of that.

JFQ: How do you define jointness and the Guard's role in fostering it since you are now a part of the joint team?

General Lengyel: I think that joint understanding and joint operations are the only way we are going to do business going forward. That's the way we fight wars. It's a joint coalition operation now. As part of the operational force, for the last 15 years for sure and really for the Air Guard, you go back to 1991, we've flown combat sorties every day since

then. The need and the requirement to understand the joint force, how it integrates, how it operates, to be able to have networks across all the Services, not just the Army and the Air Force is extremely important. Joint also includes the interagency community. Sometimes the National Guard brings a good perspective on how to work with first responders and interagency partners, particularly in the homeland, but not just here. We had [U.S. Immigration and Customs Enforcement] and [the Federal Bureau of Investigation], we had all kinds of agencies working together. Who's herding all of these people and who understands it? Joint is the way of the future, it's the current way we are doing it, and it is only going to become more and more joint going forward. The Guard's going to be a part in it, and if we are going to play in it, particularly at the Joint Chiefs staff level, we've got to be steeped in it, just like everybody else. JFQ

Latvian joint terminal attack controllers and joint fires observer perform tactical movements for close air support training mission with C Company, 125th Infantry Regiment, Wyoming, Michigan, July 28, 2015, at Grayling Air Gunnery Range during Northern Strike 15 (U.S. Air National Guard/Scott Thompson)



The Operational National Guard

A Unique and Capable Component of the Joint Force

By Joseph L. Lengyel

Since the attacks on 9/11, we have seen a confluence of factors shaping our security environment that presents challenges much different from the past. Globalization, the rise of near-peer powers and regional actors, sociological changes, and extreme weather are some of the most significant factors that make our security environment dynamic and complex,

both at home and abroad, with the pace of change accelerating.

Major power competition will continue as states such as Russia and China test longstanding international customs and engage in activities that are just short of conflict, yet whose actions provoke, disrupt, destabilize, and test the limits of the West and its allies. Other states such as Iran and North Korea continue to threaten the Middle East and Asia Pacific, respectively, and pursue technologies and capabilities that threaten not only neighboring countries and our allies but also our citizens in the homeland.

Violent extremist organizations continue to persist and evolve as their capabilities and tactics become increasingly more unconventional and as they weaponize technology and commercially available materials to add new threat dimensions that could bypass our traditional defenses in unexpected ways.

Demographic shifts also affect the challenges we will face in the foreseeable future. The trend toward greater urbanization and megacities makes populations more sensitive to disruptions, especially as they rely on just-in-time logistics, and our Services are dependent on the information grid. Furthermore, the increase in the number and intensity of natural disasters challenge the capacity of civil authorities.

Warfight First, Homeland Always

As it moves into the future, the U.S. military will remain a key instrument in maintaining security and stability around the globe and here in the homeland. How the joint force adapts to the requirements of that environment is critically important. It will require a military that can rapidly surge forces

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Soldiers from Charlie Company, 1st Battalion, 69th Infantry Regiment, New York Army National Guard, act as opposing force during final battle of Exercise Talisman Saber 17, July 19, 2017, at Shoalwater Bay Training Area, Queensland, Australia (U.S. Army National Guard/Michael Tietjen)

overseas, protect the homeland from emerging threats, and can work hand in hand with our allies, partners, and a multitude of governmental and nongovernmental organizations. Maintaining an operational National Guard, which is approximately 20 percent of the joint force, is essential to this end.

As the combat reserve of the Army and Air Force, the National Guard and Reserve component will be a critical part to any joint campaign. Since the first Gulf War in 1991, and even more so since 9/11, the National Guard has evolved into an operational warfighting organization, designed with a balance of combat and enabling units that largely mirrors the Active component. It has provided the joint force with the ability to rapidly expand its power overseas via the authorities and readiness resources granted by Congress. The capabilities and experience we gain from combat and

operational deployments are utilized here at home and have transformed the Guard into a ready and capable force. As the first military responder in the homeland, the National Guard has the necessary unique authorities, capabilities, and partnerships to ensure we are ready for the worst night in America. During my time as the Chief of the National Guard Bureau, my focus will remain with our three primary mission sets: warfighting, securing the homeland, and building enduring partnerships. These three fundamental missions will guide us as we develop the future National Guard.

Warfighting

During most of the 20th century, the National Guard served as a strategic reserve, ready to be mobilized for large-scale conflicts. But in the new security environment, the Nation needs a Guard that is rapidly scalable and accessible.

Both the Army and Air Force will rely more heavily on the National Guard as the character of war continues to evolve. The operational Guard of today has an expectation that it will be utilized and deployed. Once mobilized and trained, the Guard is interchangeable with the Active component, providing the joint force with greater capacity and capability for the fight.

Thousands of National Guard members serve around the globe on any given day. From a current average of 18,000 mobilized, I believe we can judiciously increase the number of mobilized members over the next several years to support combatant commands around the world and augment Active forces in countering threats wherever they exist. The right level can be maintained if these increased mobilizations are recurring, rotational, sustainable, and predictable with acceptable dwell times.

Furthermore, deploying the Guard using mission-assigned readiness, whereby units are trained to the required readiness level, can also be an efficient use of training resources. Leveraging these real-world operations, along with high-end training exercises such as Combat Training Center rotations and Red Flag, affords the Guard challenging training and global employment opportunities that not only build readiness in the Guard but also preserves readiness in the Active components. Additionally, programs such as the Army's Associated Units Pilot Program, a multicomponent initiative, and the Air Force and Air National Guard's integrated and multicomponent associate wings ensure we are fighting as a total force. These mobilizations, multicomponent programs, and training opportunities are fundamental for developing leaders and retaining unit members while also providing predictable and sustainable mobilization cycles that maintain an operational Guard.

Securing the Homeland

The National Guard plays a unique role in the homeland. From the Air Guard protecting our skies from 15 of the 16 Aerospace Control Alert sites, to Chemical, Biological, Radiological, and Nuclear (CBRN) Enhanced Response Force Packages (CERFP) ready to battle the effects of weapons of mass destruction (WMD), to our engineers repairing devastated roads from floods and hurricanes and our aircraft bringing lifesaving supplies, the National Guard is the Nation's primary military domestic crisis response force, ready to augment America's first responders.

America has benefited from its geographic location to defend the homeland with friendly neighbors to the north and south. Two large oceans to our east and west serve as natural barriers that have made it difficult for hostile powers to attack. During the Cold War, U.S. forces primarily had to contend with the ballistic missile and aerospace threat from one country. However, we no longer enjoy this safe haven due to new technologies and weapons that could reach the heart of America.

These new weapons, once limited to major powers, have found their way into states such as North Korea and Iran, where work on ballistic missile technology continues today at a rapid pace. Proliferation of nuclear technology, biological and chemical weapons, and high-yield explosive devices has increased the threat of a WMD attack on the United States. Delivery mechanisms for these kinds of weapons have also multiplied, and our adversaries continue to probe for weaknesses in our defense. In any future conflict, our homeland could become part of the global kinetic battlespace, with strategic effects coming from such domains as space and cyberspace. We must be able to respond rapidly to widespread disruptions to our critical infrastructure and posture the country for recovery and resiliency. Perhaps most important, we need the processes and plans in place to work with local, state, and Federal authorities to deal with crises at the right level to provide the necessary defense and resiliency capabilities for the homeland.

The National Guard's role in the homeland was greatly enhanced with the elevation of the Chief of the National Guard Bureau (CNGB) to become a full member of the Joint Chiefs of Staff in 2012. The CNGB was also given the responsibility of being the principal advisor to the Secretary of Defense, through the Chairman of the Joint Chiefs of Staff, on matters involving non-Federalized Guard forces. This new designation provides the CNGB with the ability to ensure seamless support during times of crisis when coordination is required with the states and North American Aerospace Defense Command/U.S. Northern Command (NORAD/USNORTHCOM). This coordination is particularly important at the beginning stages of an emergency when a clear delineation between Federal and state lines of responsibility may not be evident.

In addition to 9/11, Hurricane Katrina was one of the most significant events that shaped the National Guard's capability in the homeland and demonstrated the agility and resilience of our force. In 2005, while approximately 79,000 Guard Soldiers and Airmen were deployed to Iraq and Afghanistan,

Hurricane Katrina hit the Gulf Coast and roughly 50,000 Guard members were called to respond. Concepts such as the Dual-Status Commander (DSC) and Emergency Management Compacts (EMACs) had been instituted on a limited scale prior to Katrina, but it was not until Katrina that the importance of cooperation among the several states and Federal Government was fully realized. EMACs allowed states to help other states with resources and manpower. Additionally, creating a DSC who reported both to the state governor and the Federal military chain of command achieved the necessary unity of effort while giving local authorities control over their own resources. During this time, we also improved our domestic command and control structures by establishing joint force headquarters in each of the 54 states and territories. Improvements were made in the ability of these headquarters to communicate and share information with each other and the national command structures.

Today, whether working in a Federal (Title 10) or non-Federal status (Title 32 and state Active duty), the National Guard is able to leverage its unique authorities to provide both essential domestic response as well as defense capabilities should the homeland ever experience the worst night in America. The Guard builds its readiness by training for its Title 10 missions and has the capability to deploy anywhere in the world. Concurrently, Guard members have built-in responsiveness in their non-Federal status and are always ready for contingencies at home. Both fit squarely within the National Military Strategy. In addition to the 18,000 Guard members Federally mobilized in Title 10 status, more than 4,000 conduct missions in Title 32 (state controlled) status on any given day.

One of our key advantages is that geographically, the National Guard is present in approximately 2,600 communities. Leveraging their overseas experience from the warfight, our citizen Soldiers and Airmen return to their communities where they take back their readiness, capabilities, and skills to



F-16 Fighting Falcon from Ohio Air National Guard's 180th Fighter Wing in Swanton, Ohio, stands ready for training exercises at MacDill Air Force Base in Tampa, Florida, February 2, 2017 (U.S. Air National Guard/Joseph Boyer)

defend and secure our nation's skies and borders—and remain prepared for simultaneous contingencies that may occur at home and abroad.

Units such as the Army National Guard's 117th Space Battalion and Colorado and Alaska's missile defense battalions are protecting the homeland from the evolving dangers associated with the space domain and from long-range missile capabilities that could reach the homeland. In cyberspace, the Guard's cyber warriors are situated across the 50 states, our territories, and the District of Columbia, supporting the National Guard's and U.S. Cyber Command's cyber missions. The Guard is expected to grow to 43 Cyber Units across 34 states by fiscal year 2019, in addition to the 54 Defensive Cyberspace Operations Elements located in all of the states, territories, and the District of Columbia.

Given our unique authorities to work with law enforcement agencies, the

National Guard plays a large role combatting transnational criminal activity such as drug-trafficking. The Guard's Counterdrug Program is closely tied to the Department of Defense (DOD) and Office of National Drug Control Policy. Our Soldiers and Airmen play a vital role in the detection, interdiction, disruption, and curtailment of drug-traffickers and its related national security threats to the homeland.

On the CBRN front, nearly 14,000 Guard Soldiers and Airmen comprise approximately 60 percent of the DOD's CBRN response capabilities. The National Guard's capabilities include 17 CERFPs and 10 regionally aligned Homeland Response Forces. Should these units ever be needed, we will be able to react quickly and efficiently.

In this domestic threat environment, national defense and homeland security are a shared responsibility between the Federal Government and the several

states. The National Guard is the military organization best positioned for synchronizing state and Federal responses to ensure there are no unintended gaps. The Guard is evolving and adapting as it continues to play a more prominent role in the defense and security of the homeland.

Building Enduring Partnerships

The joint force cannot fight America's wars or defend the homeland without its partners. Allies and partners, at home and abroad, are what increase our strength and resiliency during times of crisis and give us an asymmetric advantage over our adversaries. During the major wars of the 20th century and in our recent wars against al Qaeda and the so-called Islamic State, the United States has worked in concert with allies and partners to achieve its objectives. When putting an economic value on our partnerships and alliances, the aggregate gross domestic product for

the United States and its European and Pacific allies is \$44.4 trillion, with just over \$1 trillion in military spending. This level of economic power among voluntary alliances is unparalleled in world history and underwrites global security.

Almost 25 years ago, the National Guard began its State Partnership Program (SPP) to assist the countries of Eastern Europe reform their defense sector, improve preparedness, and develop leaders. What began as a program of 10 partnerships has spread across five continents, and will grow to include 79 nations in the near future. We have witnessed the fruits of these relationships, which are built on trust, the exchange of ideas, and mutual respect. Our partnerships are located in strategic regions around the world and support the transition of many nations from security consumers to global security providers. The SPP builds trust and friendships and assures allies around the world.

The National Guard's emphasis on partnerships did not begin with SPP. Our history as an organization controlled by the several states naturally led us to build partnerships with state agencies and officials. In times of disaster, the Guard supports first responders to provide the necessary relief and aid that communities need. When there is disorder in communities, the Guard is called on to support local and state law enforcement to restore peace and guarantee the rights of citizens. We are a part of multiagency integrated playbooks that governors use in planning for and responding to crises, whether it is a natural disaster, civil disorder, or an attack from an adversary abroad. This integration with law enforcement and first responders also extends to the Federal Government, where we work together with such organizations as the Department of Homeland Security, which includes the Federal Emergency Management Agency. The National Guard is a critical component of the National Response Plan and works closely with NORAD/USNORTHCOM in defense of the homeland. The Guard instinctively takes a collaborative and

multiagency approach to all of joint force problem sets. This is how we do business.

The Minuteman: Innovation Is in Our DNA

Our three core missions—warfighting, securing the homeland, and building enduring partnerships—could not be accomplished without our citizen warriors, symbolized by the Minuteman. Our Soldiers and Airmen come from individual states, unique communities, and have been answering the call ever since the first militia was founded in Massachusetts in 1636. While the underlying principles of the Minuteman remain constant, ready to defend our communities and the Nation, the Minutemen of the 21st century are a premier force that is a key component of the joint force. They are citizens who want to serve, but also want to go beyond and contribute to businesses and their communities in other ways. They are adaptive and innovative, often bringing diverse and new ideas on how to accomplish different missions.

While the past 16 years of war forever have changed the National Guard into an operational force, the U.S. military deferred much of its research and development as we prosecuted the wars in Afghanistan and Iraq. During this period, the rest of the world did not remain idle, and as a result, our technological advantage has eroded. As we develop our next set of competitive advantages for the military, which will rely on American innovation and technology, the Guard will play a major role researching, developing, and fielding innovative systems, processes, and operational concepts. Innovation is inherently in the DNA of the National Guard because the scientists, engineers, and computer experts we see in the private sector—developing the game-changing innovations that ensure America maintains its military superiority—are the same individuals who have a military life serving in the Guard. As we look for ways to make our military more agile and technologically superior, the Guard's citizen-warriors will lend their skills and talents and play a critical role in developing the force of the future.

Conclusion

The operational National Guard is a unique component of the U.S. military. As a combat reserve of the Army and Air Force, the Guard can significantly surge the size of the joint force in a short period of time to deter major powers or conduct smaller operational deployments when required. The ability to rapidly expand and contract the joint force is an extraordinary capability for our nation. At the same time, the skills and experience that our Guard members gain from these operations can be utilized here at home.

Our members are a part of the total Army and Air Force, but have unique and distinct roles in the homeland, which is strengthened by our business model. We are the military force securing the homeland, and proximity to our communities allows us to be the military's first responders when it comes to homeland defense and security. We build resiliency into the homeland. We make bad days better, no matter the cause of the catastrophe. With the capability to easily transition from different state and Federal statuses and authorities, the National Guard empowers the President and governors to address each crisis at the appropriate level.

None of our missions are accomplished without the members of the National Guard—citizen Soldiers and Airmen, along with their families and employers, who commit to serving the Nation, states, and communities alike. In many places across the Nation, we are *the* face of the military. When you call out the Guard, you are calling America. JFQ



Open Sources for the Information Age

Or How I Learned to Stop Worrying and Love Unclassified Data

By James M. Davitch

After years of major spending on intelligence, surveillance, and reconnaissance (ISR) collection capabilities, the Intelligence Community (IC) is beginning to make a commensurate investment in technology to improve intelligence analysis.¹ However,

absent a change that recognizes the increasing value of open source information, the IC will not realize a return on its investments.

This article investigates the origins of the modern IC and its tendency to rely on classified data to the exclusion of publicly available information, the utility of open source information and a new way of thinking about it as the key component for future early indications and warning (I&W), and a recommended way forward for the IC and possible steps for

implementation of an open source information-enabled military intelligence force.

Harnessing the analytic potential in open source data, rather than closely guarded secret information, is *the* Big Data challenge facing intelligence professionals. Open source information may be the first indication of an adversary's hostile intent in what Department of Defense (DOD) leaders call the likely future threat environment.² But the IC bureaucracy remains locked in habitual patterns focused narrowly on classified

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sources. The first step to understanding why requires observation of the IC's organizational culture.

A Culture of Secrets

The combination of the Pearl Harbor surprise attack and a decentralized intelligence apparatus divided between the U.S. Army and Navy led many to believe the United States was vulnerable to another unforeseen strike. This led President Harry Truman to consolidate the intelligence mission, which, he hoped, would identify preliminary I&W of foreign aggression. Thus the 1947 creation of the Central Intelligence Agency (CIA) was, in essence, a hedge against future surprises.³ So began the period of Industrial Age intelligence running from 1947 to about 1990.

The IC's narrow focus on the development and capabilities of the Soviet Union made "national intelligence" the primary feature of collection and reporting. The Soviet Union represented a complicated target and information about it was sparse. But as an intelligence problem it was "comparatively less complex" to today's globalized, interconnected, and interdependent geopolitical setting.⁴ The Soviet Union's closed society and impressive counterintelligence architecture made necessary the development of expensive sensors and platforms to provide highly sought after puzzle pieces in this denied environment.⁵ In the words of Gregory Treverton, "In the circumstances of the high Cold War, there were powerful arguments for targeting intelligence tightly on the Soviet Union, for giving pride of place to secrets, especially those collected by satellites and other technical means."⁶

The primary customer for Cold War intelligence was the President and National Security Council because it was the President who would bear the brunt of the blame if the United States suffered another surprise attack. Sensors and platforms were tailor-made to focus on counting Soviet aircraft, ships, and other military equipment. When the IC looked to open sources, it observed mostly the official messages and propaganda sent from the Soviet high command to the

masses; this, it was presumed, might provide insight for the President into the adversary leadership's thinking.⁷ However, the IC's weight of effort for planning and budgeting was geared toward exquisite collection systems.

The IC's focus on classified sources owes largely to the way it responds to the collection priorities laid out in the National Intelligence Priorities Framework (NIPF). The NIPF's purpose is to provide senior policy officials a vehicle to dictate a prioritized list of "critical interest" issues to the IC.⁸ But the IC's toolkit is filled mostly with instruments that produce classified data. Therefore, it attempts to address NIPF priorities with the resources at hand and the methodologies deemed "proven" by victory in the Cold War. This perpetuates the acquisition and development of new sensors and platforms for the production of more classified information. The IC's method of responding to intelligence problems by looking predominantly to classified sources merits review.⁹

Breaking the current paradigm is difficult, but essential, if the IC is to assume a more proactive posture. Barriers to this goal include organizational inertia, the fear of untested alternative methods, and the satisfaction of answering simpler questions, no matter how illusory their utility. Large organizations seldom respond to change until after a crisis and instead follow established routines and simple standard operating procedures.¹⁰ Under the prevailing intelligence collection construct, professionals perpetuate organizational inertia by engaging only in what Ronald Garst defines as *descriptive analysis*.¹¹ For example, analytical cells routinely provide statements describing what happened, when, and where, thereby eschewing predictive analysis.¹² Not coincidentally, U.S. intelligence sensors excel at providing data that supports descriptive intelligence analysis. But to this end, the IC is reactionary and fails to address what decisionmakers are often more interested in: describing what *will happen* and why. Daniel Kahneman refers to this tendency as the "substitution heuristic" whereby one simplifies difficult tasks by evaluating a related, easier question.¹³

The reliance on secret data derived from classified sources lends itself to answering intelligence questions quantitatively, such as the number of missions tasked and images collected and processed. These data are easy to numerically collect and aggregate, but it distracts from investigating qualitative indicators that might determine whether the intelligence process is contributing meaningfully to solving the underlying intelligence problem.¹⁴ So the question, "Is our collection posture working to learn more about the enemy?" becomes instead, "How many ISR sorties have we flown in support of the leadership's priorities?"

It is important to note that while open sources may provide great utility, they are not a panacea for all intelligence problems. Each situation requires the requisite examination of its underlying characteristics. But the failure to address open sources' potential merits by reflexively dismissing it is, at best, a failure to consider creative solutions. At worst, it signals that the IC is unprepared to tackle the emergent complexity of global geopolitical dynamics and risks missing important I&W of future conflict.¹⁵

The 9/11 attacks provided the impetus for moving open source information into the forefront of the value proposition in that its ability to significantly augment traditional forms of intelligence rapidly became apparent in the counterterrorism mission. However, it was not until the advent of open source Big Data's velocity, variety, and volume characteristics, which became apparent with the explosion of social media, that the potential for greater open source analysis in lieu of an excessive focus on classified sources became a realistic possibility. One now might consider using open sources as the entry point for the intelligence collection process and using classified data to augment the unclassified source, thus flipping the paradigm upside down.

Flaws in the Technical Solution—It's Not Only About Secrets

Speaking to the Council on Foreign Relations, former CIA director Michael

Hayden described intelligence trade as a jigsaw puzzle.¹⁶ The metaphor leads one to believe that all the pieces are available awaiting assembly. Unfortunately, this thinking typically translates to a need for more collection sensors that, in turn, promotes the exclusivity of classified information. All of this perpetuates the dubious contention that classified collection provides a window to truth. Moreover, it rewards both the pursuit and creation of more data, which burden analytical efforts. The net result is that the exclusivity of secret intelligence becomes the basis for analysis to the limitation, or even exclusion of, creative thinking.¹⁷

Intelligence problems, especially as they pertain to vague indications of impending hostilities, more resemble mysteries than puzzles. Anthony Olcott notes mysteries are difficult, if not impossible, to solve definitively, “no matter how much information is gathered,” classified or otherwise.¹⁸ Trying to answer mysteries usually involves uncertainty, doubt, and cognitive dissonance, which most seek to avoid. But embracing doubt and addressing probabilities are essential because so few intelligence problems lend themselves to easy, certain, factual answers. The only certainty with respect to intelligence mysteries is persistent uncertainty, which cannot be alleviated by simply throwing more surveillance sensors at the problem.

Philip Tetlock described the allure of certainty, stating that it “satisfies the brain’s desire for order because it yields tidy explanations with no loose ends.”¹⁹ But Kahneman warns against the overconfidence certainty can provide: “Declarations of high confidence mainly tell you that an individual has constructed a coherent story in his mind, not necessarily that the story is true.”²⁰ Doubt can sometimes be mitigated, though not eliminated, with more evidence that might even come from classified sources. But pointing to evidence exclusively derived from restricted data while claiming to have found truth is like a blind man describing the colors of a rainbow.²¹

While puzzles requiring the acquisition of secret “pieces” do persist, leveraging open source information is increasingly

able to help us better understand mysteries *and* answer specific, defined problems. Open sources can point to breakthroughs in a nation’s weapons research and development timeline, a task formerly the exclusive province of espionage or technical sensors. Asking questions like “What are the range and speed capabilities of the latest generation Chinese surface-to-air missile?” can be addressed through the lens of open sources.²² Olcott illustrates the commercial, public-sector use of open sources, relating what Leonard Fuld calls the cardinal rule of intelligence: “Wherever money is exchanged, so is information.”²³

Considering the likely eventuality that intelligence problems of the future will more resemble mysteries than secrets, analysts will need to employ more creative and critical thinking and use a more diverse assortment of information than before. This will entail a greater mental workload for analysts used to the collect-process-analyze model traditionally centered on the classified collection. The IC’s knee-jerk inclination to accept the answer offered by classified data satisfies what Daniel Kahneman calls our System 1 response, a mode of thinking in which the mind operates “automatically and quickly, with little or no effort.”²⁴ Kahneman contrasts this mode with the concentration required of System 2, which “allocates attention to the effortful mental activities that demand it.”²⁵ The uncertainty created by nebulous mysteries that often do not lend themselves to prompt answers, and the creative thinking required to solve them, is System 2 territory.

The IC’s emphasis on classified information may ultimately be a barrier to creative thinking. Access to classified information carries with it the currency of prestige and the “need to know” restriction, which “fosters compartmentalized—reductionist—views of the issues at hand.”²⁶ Josh Kerbel points to the Cold War era “when [the IC] had a relative monopoly on good information,” which “continues to cause analysts to confuse exclusivity of information with relevance to decisionmakers.”²⁷ During the Cold War, prized information was often technical and ephemeral, mainly

consisting of communications and electrical emissions. Intelligence professionals often refer to this data as a “detectable signature” of the collection target. Such detectable signatures, fleeting during the Cold War, have exploded in the Information Age.

Wearable technology and the Internet of Things provide precise geolocation of an individual and connects one’s previously private details to the open architecture of the Internet. Moreover, this information does not have to be secretly seized by a high-altitude sensor or through clandestine espionage. In fact, individuals *willingly* make their data available for observation. As Treverton noted, in the Information Age, “collecting information is less of a problem, and verifying it is more of one.”²⁸ The open source environment provides detectable signatures of the adversary undreamed of prior to the advent of the Information Age.

The influx of open source data, including rapidly growing social media platforms, will only become more vital sources of information in the future. Kerbel notes, “[The IC] must get over its now illusory belief that its value-added comes mostly from information to which it alone has access—secrets.”²⁹ Several open source social media companies are billion-dollar-a-year companies, to wit: Instagram. Founded in 2010, it is arguably the fastest growing social media channel, reaching 300 million users in 2016.³⁰ Alec Ross noted, “Today there are roughly 16 billion Internet connected devices. Four years from now that number will grow to 40 billion Internet-connected devices.”³¹

Despite these publicly available sources of information, open source intelligence remains a lesser form of intelligence in the realm of intelligence disciplines. Treverton counters, “Intelligence now has . . . vast amounts of information . . . not a scarcity of information that mainly comes from satellites or spies and is therefore regarded as accurate.”³² Publicly available information is not only a valuable supplement, but it is also redefining I&W and should be used as the basis of future intelligence analysis. In essence, open sources should not augment secret



Soldiers with 82nd Airborne Division, Fort Bragg, North Carolina, and Italian Folgore Airborne Brigade, Vicenza, Italy, conduct Joint Forcible Entry Operation during Network Integration Evaluation 16.1, September 27, 2015, at White Sands Space Harbor, New Mexico (U.S. Army/Aura E. Sklenicka)

information, but the reverse. Doing so may pay dividends toward gaining essential warning in the nebulous current and future operating environments.

I&W—The Open Source Opportunity in “Hybrid War”

In the summer of 2014, “pro-Russian separatists” began appearing in eastern Ukraine. Moscow repeatedly denied that its regular forces were operating on Ukrainian soil, but social media truth gave lie to the Russian government’s insistence. Young soldiers posted “selfies” to Instagram that, presumably unbeknownst to them, contained metadata that geolocated their position within Ukraine’s borders. They provided strong evidence of Russia’s complicity in the shootdown of Malaysia Airlines Flight 17.³³ Initial accounts rapidly flowed in from open sources to include pictures uploaded to Twitter and Instagram as well as numerous YouTube videos.³⁴ This type of cueing indication in and of itself does not con-

stitute an “end product,” but it could be used to direct traditional ISR collection assets to verify the open source tip.

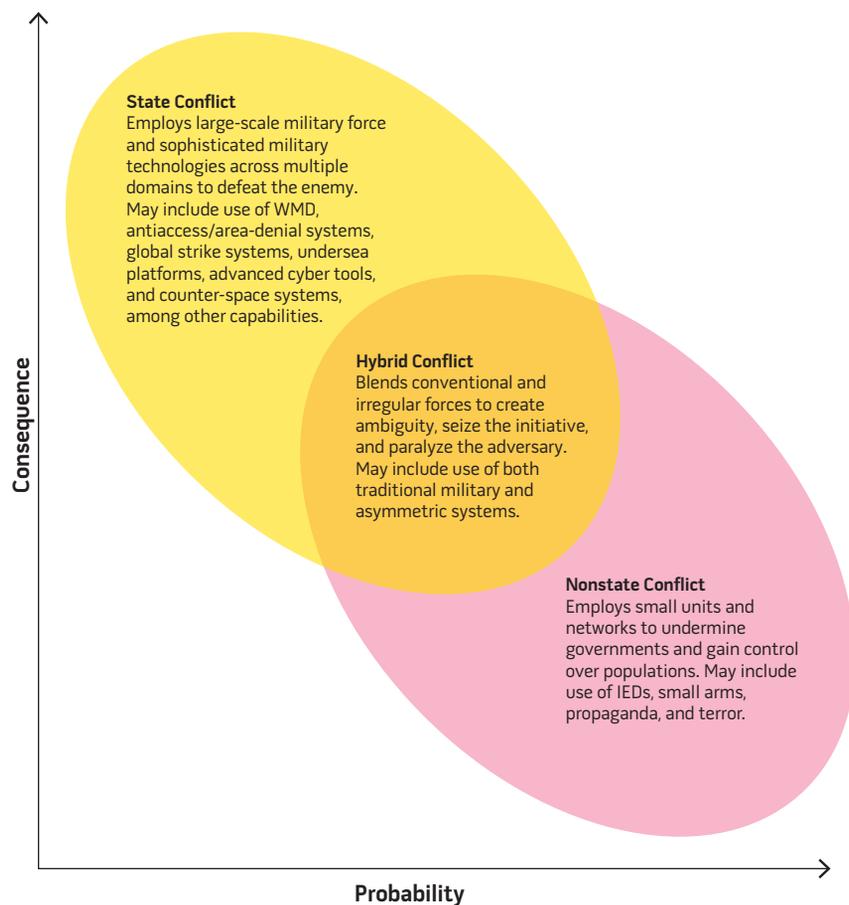
Despite the crushing weight of evidence to the contrary, Russian defense outlets improbably assigned blame to Ukrainian forces.³⁵ Russian President Vladimir Putin, seizing the opportunity to win the propaganda war, crisply stated as much, declaring the situation could have been avoided “if Kiev had not resumed its military campaign against pro-Russian separatists.”³⁶ These types of conventional and unconventional incidents mixed with intense public relations campaigns will be the U.S. military’s most likely, and most dangerous, scenarios for conflict into the future.

General Martin Dempsey, former Chairman of the Joint Chiefs of Staff, offered (also outlined in the 2015 National Military Strategy, see figure) an appropriate definition of this type of information operation: “State and non-state actors working together toward shared objectives, employing a wide range of weapons

such as we have witnessed in eastern Ukraine.”³⁷ He continues, “Hybrid conflicts serve to increase ambiguity, complicate decision-making, and slow the coordination of effective responses. Due to these advantages to the aggressor, it is likely that this form of conflict will persist well into the future.”³⁸

Some have argued the concept of hybrid war in Ukraine is simply a continuation of conventional techniques and procedures.³⁹ Whatever the definition, what we are seeing is the most likely scenario for future conflict because it allows the adversary to do as Sun Tzu recommended: capitalize on the adversary’s weaknesses while maximizing its own strengths. The U.S. military possesses overwhelming conventional might. But by engaging in disinformation and employing non-official military forces, the adversary can keep the conflict below the threshold where the United States might use its conventional advantage. As some have noted, such hybrid war strategies could “cripple a state before that state even realizes the

Figure. Continuum of Conflict



conflict had begun,” and yet it manages to “slip under NATO’s [North Atlantic Treaty Organization’s] threshold of perception and reaction.”

This type of future conflict will not only be confined to the U.S. adversary in Eurasia. Michael Pillsbury describes China’s possible employment of a military doctrine called “unrestricted warfare,”⁴⁰ which in many ways is analogous to these information operations.⁴¹ One possible dangerous course of action in this region might entail the use of “civilian” Chinese fishing boats executing what for all intents and purposes is a military operation to solidify its assertion of territoriality. Such activities are not without precedent. Small-scale “fishing incidents” may become the source of increasing naval tensions. They provide China plausible deniability while remaining under the threshold for spurring greater U.S. military involvement.

As Steven Pifer noted in 2015 testimony before the U.S. Senate, irregular forces presaging larger conventional movements may be the example of future encounters.⁴² General Philip Breedlove, the former U.S. European Command commander, also articulated these concerns, insisting NATO must be prepared to respond to “special forces without sovereign insignia who cross borders to create unrest” and ultimately destabilize countries.⁴³ However, traditional I&W techniques and ISR systems employed by the IC have historically focused on the deployment of large armed forces. They do so at the risk of missing earlier indications that might forestall conflict.

The Office of the Secretary of Defense’s intention in pursuing the Third Offset concept is to deter potential adversaries from action. To that end, the IC’s goal should be providing the timeliest I&W of impending conflict to avoid

decision paralysis as the United States confronts entities falsely claiming non-combatant status. A sub-goal should be to provide decisionmakers with evidence to counter aggressor propaganda. The best tool for these missions in the future will likely not be a traditional collection platform originally designed to count Soviet tanks; it will be open source-derived information. Cold War-era tactics, techniques, and procedures are not conducive to identifying “little green men,” innocuous fishing vessels, or the funding, arms, and leadership supporting them. Therefore, changing the way the IC conducts operations is warranted. That begins with a focus on open source information augmented by secret-seeking sensors capable of adding detail resulting in open source intelligence.

As the Third Offset implies, there is an important role for human-machine collaboration in this new open source-focused environment, specifically regarding artificial intelligence. While social media outlets like Facebook, Instagram, and Twitter are popularly used worldwide, some countries use other social media outlets more predominantly. The social networking sites VKontakte and QZone are the most popular outlets in Russia and China, respectively. Analysts must be cognizant of that fact and adept at deciphering not only foreign languages but also cultural nuances of the society in question. Automatic machine translation tools are rapidly improving and can help with both. In May 2014, Microsoft presented a computer program capable of translating spoken words in real time.⁴⁴ Describing the application of “deep learning” to machine translation, Maryam Najafabadi et al. relate how Google’s “word2vec” tool can quickly learn complex relationships between hundreds of millions of words.⁴⁵ Using what are called “word vectors” allows the machine translator to distinguish nuance and context rather than literal translation. Artificial intelligence translation tools directed at social media outlets could provide a wealth of insight into lower level authority structures. Machine augmentation will not only allow us to hear what these individuals are saying, but also understand what they mean.



As part of USS *Sampson* Oceania Maritime Security Initiative mission, U.S. Navy Sailors and U.S. Coast Guard Pacific Law Enforcement Detachment Team personnel approach Chinese fishing vessel, November 29, 2016 (U.S. Navy/Bryan Jackson)

Recommendations

Major changes are required in the way military intelligence professionals think about problems. A cultural mindset change is warranted that values publicly available information as much as, if not more so than restricted data. For the military, change will begin at entry-level education and training venues. “Digital natives,” the next generation of intelligence professionals that has grown up with ubiquitous technology and social media outlets, will likely find it easier to break from legacy mindsets. However, the lure of the classified source will still be seductive. Intelligence training must support the next generation’s inclination to reach for the open source.

Additionally, future Airmen will require training in the tools available at that time and encouragement to pursue their own innovative ideas to best collect and analyze open source material. Specific

analytic training should include problem restatement, causal flow diagramming, weighted rankings, devil’s advocacy, and many other techniques as described by Morgan Jones in *The Thinker’s Toolkit: 14 Powerful Techniques for Problem Solving*.

The importance of teaching analytical techniques to Airmen for use with the avalanche of data cannot be overemphasized. First, these techniques allow analysts to “show their work,” making their analyses transparent to others. Second, they teach language precision, forcing analysts to frame the problem correctly to ensure it is answerable and not open to interpretation. Last, they can prevent military analysts from falling into the System 1 trap that Kahneman describes. The natural human inclination to grab onto the first plausible explanation is a key challenge for anyone, but especially for intelligence professionals confronted with the time constraints of military operations.

Those in leadership positions will often seek data compatible with the beliefs they already hold. Normally, in military operations, this means a desire for classified information over less glamorous open sources.⁴⁶ One way to break free from this confirmation bias is to use skills inherent in applying appropriate analytical techniques. With these skills and knowledge, the IC will be able to better respond to decisionmakers, rather than wasting time and effort on mundane production quotas endlessly seeking puzzle pieces.

If the IC is serious about developing critical thinking skills, the right answer is not to dismiss these analytical techniques out of hand but to experiment in accordance with proven scientific methods. Tetlock notes, “The intelligence community’s forecasters have never been systematically assessed” to determine the accuracy of their analytic predictions.⁴⁷ Were the IC to do so, the entire test

would be relatively inexpensive compared to the cost of flying and maintaining ISR platforms. Looking at the results of an open source–based experiment could provide valuable, low-cost information that might better enable future planning and budgetary decisions.

But what to do with “legacy” intelligence analysts? Individuals born prior to the Information Age may be less welcoming of open source material and more disposed to favor traditional sources of collection. But rather than endure the slow movement of time while the next generation ascends to leadership positions, forward-thinking military analysts must break from the classification fixation now. They must realize the relevance of open sources to guide collection, not the other way around. Additionally, individual analysts must *want* to contribute. But how?

The Intelligence Advanced Research Projects Activity (IARPA) is an Office of the Director of National Intelligence–sponsored program that challenges participants across the IC to engage in forecasting competitions. A spinoff program called the Good Judgment Project involves any willing participant both inside and out of DOD. The first IARPA tournament began in 2011 and explored the potential of crowd-sourced intelligence. Participants made predictions about real-world events, which were then judged by the precision of their forecast. Perhaps the most interesting outcome of the Good Judgment Project was that individuals with access to restricted information had no advantage over those without. In fact, the opposite was true, possibly due to the cultural bias toward classified information that may have prevented those individuals from forming more holistic predictions. In a *Washington Post* opinion piece detailing the competition’s results, David Ignatius specified that individuals *without* access to classified information “performed 30% better than the average for the intelligence community analysts who could read intercepts and other secret data.”⁴⁸ He continues, “The NSA [National Security Agency] obviously operates on the theory that more data are better . . . but this mad dash for signals lacks the essential quality of sound judgment.”⁴⁹

Just as the military stresses physical training (PT) culminating in regular tests, so should DOD champion regular “cognitive PT” tournaments. Results from multiple Good Judgment Project competitions revealed, “Prediction accuracy is possible when people participate in a setup that rewards only accuracy—and not the novelty of the explanation, or loyalty to the party line.”⁵⁰ In other words, competitions like these foster both creative and critical thinking while honing skills on an individual level. Furthermore, competitions may lend themselves to developing and asking questions that can be answered, measured, and scored. Competitive events are not new for the military. For decades fighter pilots have trained against rival squadrons during “turkey shoot” events. Winners receive accolades and the recognition of their peers. DOD needs an open source–focused ISR turkey shoot, challenging participants to form their own conclusions based on publicly available information, thereby granting agency to the individual and allowing motivated professionals to best demonstrate their analytic prowess.

Competition between individuals and units could spur motivation and breed further intelligence excellence. And based on the results of the Good Judgment Project, one might expect open source disbelievers to become converts. At a minimum, participants will learn that classified sources matter less than the rigor one applies to analysis.

Final Points—An Opportunity for Success

Future success in detecting ambiguous clues that may lead to conflict will come through the patient process of creatively analyzing problems and articulating viable solutions. The data feeding those solutions will increasingly be found in readily accessible, yet traditionally stigmatized, open sources. But as a former Operation *Enduring Freedom* senior intelligence officer wrote, “The intelligence community’s standard mode of operation is emphatic about secrecy but regrettably less concerned about mission effectiveness.”⁵¹ Individuals must overcome the classification fixation

and focus on the information that best leads to mission success.

Machines can assist the analytical process but they are not a substitute for it. “Machines may get better at ‘mimicking human meaning’ and thereby better at predicting human behavior,”⁵² but Tetlock argued there is a significant difference between mimicking meaning and deciphering the meaning’s original intent. He concludes, “That’s a space human judgment will always occupy.”⁵³ To that end we must invest in the human mind in the form of analytic training combined with predictive forecasting based on publicly available information. Targeted investments directed toward improving creative thinking and smartly leveraging open sources will ultimately assist leadership decisionmaking and give the IC a strong comparative advantage in the future. JFQ

Notes

¹ I wish to thank Colonel Jeffrey Don-nithorne, Dr. Jon Kimminau, Dr. Lisa Costa, Dr. Robert Norton, Mr. Josh Kerbel, Lieutenant Colonel Robert Folker, and Majors Kyle Bressette and Seth Gilpin for their thoughtful comments and suggestions. All errors found herein are my own. See also Adam Lowther and John Farrell, “From the Air,” *Air & Space Power Journal* 26, no. 4 (2012), 61–102.

² Marcus Weisgerber, “Dempsey’s Final Instruction to the Pentagon: Prepare for a Long War,” *Defense One*, July 1, 2015, available at <www.defenseone.com/management/2015/07/dempseys-final-instruction-pentagon-prepare-long-war/116761/>.

³ Gregory F. Treverton, *Reshaping National Intelligence for an Age of Information*, RAND Studies in Policy Analysis (New York: Cambridge University Press, 2003).

⁴ Josh Kerbel, “The U.S. Intelligence Community’s Creativity Challenge,” *National Interest*, October 13, 2014, available at <<http://nationalinterest.org/feature/the-us-intelligence-communitys-creativity-challenge-11451>>.

⁵ Robert Baer, *See No Evil: The True Story of a Ground Soldier in the CIA’s War on Terrorism* (New York: Crown, 2002); see also Bruno Tertrais, review of *The Dead Hand: The Untold Story of the Cold War Arms Race and Its Dangerous Legacy*, by David E. Hoffman, *Survival* 52, no. 1 (2010), 220.

⁶ Treverton.

⁷ Anthony Olcott, *Open Source Intelligence in a Networked World* (New York: Bloomsbury Intelligence Studies, 2012), chap. 6.

⁸ *Ibid.*, chap. 4.

⁹ One problem with this process is that it results in poor metrics for determining intelligence, surveillance, and reconnaissance effectiveness. Civilian and military collection managers prioritize their collection requirements, derived from the National Intelligence Priorities Framework at the national level and command-driven intelligence requirements below that, based on the priority of the intelligence needed to support a given mission. Quantitative measures such as the number of missions tasked or the number of images collected and processed are often used as proxy measurements to evaluate the effectiveness of meeting prioritized collection requirements. These data are easy to numerically collect and aggregate, but they distract from investigating qualitative indicators that might determine whether the intelligence process is contributing meaningfully to solving the underlying intelligence problem. It also speaks to a failure both to critically analyze problems and to devise creative solutions. Lieutenant Colonel David Vernal, Air War College student, interview by the author, November 15, 2015.

¹⁰ Graham T. Allison and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis* (New York: Longman, 1999).

¹¹ Ronald D. Garst, "Fundamentals of Intelligence Analysis," in *Intelligence Analysis: ANA630*, vol. 1 (Washington, DC: Joint Military Intelligence College, 2000), 18–28.

¹² The difference between *descriptive analysis* describing who, what, and where questions and *predictive analysis* is that the latter does not easily lend itself to statements of fact, thereby inducing greater cognitive stress. Addressing predictive "what will happen" questions forces the analyst to assume more risk by making subjective judgments amid uncertainty. Moreover, these open-ended questions must be answered with a range of possibilities, often tied to equally subjective probabilities.

¹³ Daniel Kahneman, *Thinking, Fast and Slow* (New York: Farrar, Straus and Giroux, 2013).

¹⁴ Vernal, interview, November 15, 2015.

¹⁵ Kerbel.

¹⁶ Remarks by Central Intelligence Agency Director Michael Hayden, Council on Foreign Relations, Washington, DC, September 7, 2007, available at <<http://www.cia.gov/news-information/speeches-testimony/2007/general-haydens-remarks-at-the-council-on-foreign-relations.html>>.

¹⁷ As Lieutenant Colonel Adam Stone identified in a 2016 Air War College study, the Air Force does not have the luxury of tapping into a wealth of critical thinking (CT) capability. Pointing to the Air Force Future Operating Concept's desire for the identification of critical thinkers and metrics to track critical thinking skills, Stone executed a quantitative CT research project. He tested a sample of professional military education students in residence at the Air Command & Staff College (ACSC), School for Advanced Air and Space Studies, and Air War College (AWC). His (statistically significant) results indicated, "AF officers attending ACSC and AWC were

below average in CT skills when compared with individuals at the same academic level." See Adam J. Stone, *Critical Thinking Skills of U.S. Air Force Senior and Intermediate Developmental Education Students* (Maxwell Air Force Base, AL: Air War College, 2016).

¹⁸ Olcott, chap. 4.

¹⁹ Philip E. Tetlock and Dan Gardner, *Superforecasting: The Art and Science of Prediction* (New York: Crown, 2015).

²⁰ Kahneman.

²¹ Joseph Nye, noting the challenges facing foreign policy analysts after the Cold War, described a mystery as an abstraction that does not lend itself to quick answers or easy analysis. See Joseph S. Nye, "Peering into the Future," *Foreign Affairs* 73, no. 4 (1994), 82–93. Secrets, on the other hand, are more defined problems that can be answered via espionage or technical means. They lend themselves to satisfying seemingly factual answers and descriptive analysis. However, in the future, as more data become publicly available, proper employment of human-machine collaboration applied toward the open source information environment may yield insights formerly reserved to classified sensors alone.

²² This point was further supported in an interview the author conducted with Robert Norton of Auburn University. Dr. Norton described the potential of monitoring foreign weapon manufacturing through an adversary country's research and development timeline. He noted that foreign universities emphasize the need to publish in technical journals as much as American higher education centers do. Information concerning technical developments can often be observed slowly building and then rapidly disappearing, perhaps marking that a country has reached the appropriate phase of research to begin transitioning a capability to the operational test and evaluation phases.

²³ Olcott, chap. 4.

²⁴ Kahneman.

²⁵ Ibid.

²⁶ Josh Kerbel, "The U.S. Intelligence Community Wants Disruptive Change as Long as It's Not Disruptive," *War on the Rocks*, January 20, 2016, available at <<http://warontherocks.com/2016/01/the-u-s-intelligence-community-wants-disruptive-change-as-long-as-its-not-disruptive/>>.

²⁷ Ibid.

²⁸ Treverton, 9.

²⁹ Ibid.

³⁰ Matthew Harris, "Marketing with Instagram, the Fastest Growing Social Platform!" *The Medium Well*, February 19, 2016, available at <<http://mediumwell.com/marketing-instagram/>>.

³¹ Alec Ross, "Industries of the Future," Carnegie Council podcast, March 10, 2016.

³² Treverton, 6.

³³ Ralph S. Clem, "MH17 Three Years Later: What Have We Learned," *War on the Rocks*, July 18, 2017, available at <<https://warontherocks.com/2017/07/mh17-three-years-later-what-have-we-learned/>>.

<<https://warontherocks.com/2017/07/mh17-three-years-later-what-have-we-learned/>>.

³⁴ "What We Know So Far About the Passenger Jet Shot Down in Ukraine," *Foreign Policy*, July 17, 2014, available at <<http://foreignpolicy.com/2014/07/17/what-we-know-so-far-about-the-passenger-jet-shot-down-in-ukraine/>>.

³⁵ Ibid.

³⁶ Ibid.

³⁷ Weisberger.

³⁸ Ibid.

³⁹ Michael Kofman, "Russian Hybrid Warfare and Other Dark Arts," *War on the Rocks*, March 11, 2016, available at <<http://warontherocks.com/2016/03/russian-hybrid-warfare-and-other-dark-arts/>>.

⁴⁰ Michael Pillsbury, *The Hundred-Year Marathon: China's Secret Strategy to Replace America as the Global Superpower* (New York: Henry Holt, 2015).

⁴¹ This is especially true regarding finding asymmetries against a conventionally stronger foe.

⁴² Steven Pifer, "Russian Aggression Against Ukraine, and the West's Policy Response," testimony before the U.S. Senate Foreign Relations Committee, Washington, DC, March 4, 2015, available at <www.brookings.edu/testimonies/russian-aggression-against-ukraine-and-the-west-policy-response-2/>.

⁴³ "NATO Flexes Its Muscle Memory," *The Economist*, August 30, 2014, available at <www.economist.com/news/international/21614166-russias-aggression-ukraine-has-made-natos-summit-wales-most-important>; Dan Gonzales and Sarah Harting, "Exposing Russia's Covert Actions," *U.S. News & World Report*, April 29, 2014.

⁴⁴ "Rise of the Machines," *The Economist*, May 9, 2015, 18–21.

⁴⁵ Maryam M. Najafabadi et al., "Deep Learning Applications and Challenges in Big Data Analytics," *Journal of Big Data* 2, no. 1 (2015), 1–21.

⁴⁶ Kahneman.

⁴⁷ Tetlock and Gardner.

⁴⁸ David Ignatius, "More Chatter Than Needed," *Washington Post*, November 1, 2013.

⁴⁹ Ibid.

⁵⁰ Angela Chen, "Seeing into the Future," *Chronicle of Higher Education*, October 5, 2015, available at <www.chronicle.com/article/Philip-Tetlock-s-Tomorrows/233507>.

⁵¹ Michael Flynn, Matthew Pottinger, and Paul Batchelor, "Fixing Intel in Afghanistan," *Marine Corps Gazette* 94, no. 4 (2010), 62–67.

⁵² Tetlock and Gardner.

⁵³ Ibid.

Marine sets up M18A1 claymore mine during Exercise Cobra Gold, February 14, 2014, at Ban Chan Krem, Kingdom of Thailand (U.S. Marine Corps/Adam Miller)



The Use of Explosives in Cities

A Grim but Lawful Reality of War

By Thomas Ayres

Refugees flowing out of the Middle East pose a serious humanitarian crisis for Europe and the world at large. The indiscriminate use of violence by the so-called Islamic State (IS), the unlawful actions of the Syrian regime, and the conduct of some of the warring factions precipitated and continue to fuel this crisis. Consequent to the indiscriminate use of force and

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explosives in cities, the flow of Syrian refugees has caused some to call for a complete ban on the use of explosive weapons in cities or urban areas. But to what end? Let's not learn the wrong lessons from this calamity.

The use of military force in cities or urban environments is not a new phenomenon, nor does it present novel problems for which the Law of Armed Conflict (LOAC) is insufficient.¹ For those acting under military necessity, the LOAC demands much from those who must use force against a military objective

in an urban environment. In an effort to prevent unnecessary suffering and destruction, the LOAC attempts to regulate the conduct of armed hostilities without unduly impeding the proper or allowable waging of war. Unfortunately, the current calls by some nongovernmental organizations (NGOs) for a complete ban on the use of explosives in populated areas go far beyond what the LOAC requires.

Already, law-abiding nations forced to fight in populated areas use extreme caution. Professionalized military forces around the world take extraordinary

precautions to accomplish their complex missions while limiting civilian casualties and protecting nonmilitary structures from the effects of attacks directed toward lawful military targets. For instance, former Department of Defense General Counsel Jennifer O'Connor discussed her recent observations on a trip to Iraq and the extreme care taken by U.S. forces when making targeting decisions.² Existing LOAC obligates military commanders making targeting decisions to consider the cascading and multiplying effects of explosive weapons on civilian populations when critical infrastructure such as power, water, sewage, and hospitals is concerned.

LOAC requires the commander or anyone ordering offensive action in an urban area to make careful assessments in order to prevent an impermissible extent of “incidental loss of life or injury to civilians or damage to civilian objects.”³ The International Criminal Tribunal for the former Yugoslavia underlined this principle as a transcendent norm in noting that “certain fundamental norms still serve unambiguously to outlaw (widespread and indiscriminate attacks against civilians), such as rules pertaining to proportionality.” The commander’s role is inherently demanding, but the standard remains that only clearly excessive strikes are per se impermissible. The important point is that discretion remains vested in reasonable persons, normally military commanders, who share a professional ethos that obligates them to balance competing goals in complex circumstances with incomplete or inaccurate information.⁴ Israel’s supreme court summarized this notion by noting that the authority of military commanders “must be properly balanced against the rights, needs, and interests of the local population: the law of war usually creates a delicate balance between two poles: military necessity on one hand, and humanitarian considerations on the other.”⁵

The misguided initiative to go beyond what the LOAC already exactingly requires—to implement an unconditional ban on the use of explosives in populated areas—must be viewed in the light of recent, seemingly laudable NGO successes.

NGOs have waged a decades-long campaign to ban landmines, and they have more recently followed with a similar if idealistically humanitarian desire to ban cluster munitions. As discussed below, such efforts have been persuasive and successful in changing public, national, and international perceptions. Although the moral impulse to prohibit these explosives in cities is compelling, especially as a way to further humanitarian goals, an absolute prohibition on these weapons would further encourage groups like IS to manipulate this well-intentioned control as just a new arrow in their asymmetric quiver.

Future Enemies, Future Wars

Current violence in the Middle East, where the use of explosives in populated areas has been so devastating, continues with no end in sight. However, this current long war is also not the last war. Terrorist organizations have made their flagrant violations of the LOAC and against the customs of war routine. They fight without uniforms, habitually use human shields, or purposely place their highest value weapon systems and operations among civilians. They take these measures purposefully in order both to improperly hide themselves and to incite retaliation by law-abiding military forces to cause greater civilian casualties. Recent actions in Mosul are demonstrative and the United Nations High Commissioner for Human Rights, Zeid bin Ra’ad al-Hussein, while noting that IS herds residents into booby-trapped buildings as human shields and fires on those trying to flee, stated, “This is an enemy that ruthlessly exploits civilians to support its own ends.”⁶ These terrorist organizations do have limited means and resources, but future enemies may not have such limitations. Moreover, future enemies with greater resources and far greater war-making capacities would make only greater use of the safe haven of cities.

Although the absence of war is preferable, until that utopian vision can be realized, nations must accept the concept underpinning the LOAC that wartime violence can unintentionally spill over to

cause civilian casualties. As an agreement between nations, the LOAC has always been about finding a balance between the need for violence to achieve necessary national goals such as self-defense and the responsibility to prevent unnecessary suffering. The LOAC also seeks to preserve life and humanity and limit suffering while acknowledging the reality that wars are violent. Therefore, the LOAC does not prohibit the use of explosives in cities. However, as with any use of force, the LOAC requires a calculated decision based on necessity, proportionality, distinguishing civilians, and limiting suffering.

Such calculations are clearly more difficult for military forces to make within urban environments crowded with innocent civilians. But such calculations still do not preemptively and exclusively ban the use of explosives in cities. Where would the common enemies of mankind gather if law-abiding national military forces could never use overwhelming force within populated areas? The Islamic State has already shown us the answer through its regular use of human shields as a means to exploit a nation-state’s practice of minimizing collateral casualties. A complete ban on otherwise lawful tools available to nation-states to combat indiscriminate violence would, ironically, increase violence, increase the likelihood and quantity of innocent civilian injuries and deaths, and make the defense of civilian populations even more difficult.

Orde Kittrie, in his thought-provoking book *Lamfare*, discusses the idea of *compliance-leverage disparity*.⁷ The term is easily understood considering the terrorist organizations we now face. Their tactics to protect themselves purposely induce civilian casualties. They hide in civilian areas and invariably wear civilian clothes while conducting their operations. Kittrie contrasts “the painstaking law-abiding practices of the U.S. military and the dismissive practices of at least some of its adversaries.” Kittrie notes that these opposite approaches originate from different ideologies and tendencies regarding the levels, means, and disparity in the transparency and accountability in the use of force. The costs of compliance-leverage disparity are many, with the most insidious result



Students march to Nyakuron Cultural Center in Juba, South Sudan, April 2, 2015, during International Day for Mine Awareness and Assistance in Mine Action (Courtesy UN/JC McIlwaine)

being hesitance by law-abiding armies to use force even when such use is legal and required by military necessity. This is a great jeopardy to lawful missions and ultimately results in lengthier conflicts and even greater loss of lives.

Compliance-leverage disparity can also be viewed in a broader light. Terrorist organizations are not alone in their flagrant disregard of the LOAC. Nations also sometimes flagrantly disregard their treaty obligations or customary international law limits in order to gain an advantage. Russia's actions in Ukraine and Crimea, Hizballah tactics, Iran's proxy in Lebanon, or China's proclamation of its Nine-Dash Line claiming territorial rights over an outrageous expanse of the South China Sea are current examples. If explosive weapons in populated areas are preemptively banned, not only will terrorist organizations have easier safe harbor, but future well-resourced national

armies who see the advantage of compliance-leverage disparity will continue to use them in populated areas and benefit from the safe haven of their adversaries' adherence. Well-resourced armies not intent on following the LOAC have historically and frequently used urban areas as key defensive positions. Nazi Germany's fortification, or *Konigsberg*, during World War II is just one of many examples. Providing even greater incentive to conceal armed forces, emplace weapon systems, or fortify cities would be creating and amplifying the conditions for new forms of perfidy in the urban environment where the risk to civilians is greatest.

The unfortunate reality is that effective violence in war brings the war to its end, and when wars end quickly, potential civilian suffering generally comes to a better conclusion. In 1859, the battlefield of Solferino was strewn with 40,000 dead and wounded. Henry Dunant, moved

by the suffering, mobilized the local populace to respond and later founded the International Committee of the Red Cross (ICRC). The ICRC, the only organization named within the four Geneva Conventions, has an exclusive charter and unique capacity to protect and advance the LOAC. Many NGOs seek to limit the effects of war, but the ICRC, with its special and sometimes confidential relationship with nation-states, has been particularly balanced as they seek to limit the effects of war on both civilians and combatants. If wars are ever to be terminated, violent and deadly actions required by military necessity must be allowed. However, with its unique charter, the ICRC seems poised to take on the issue of banning explosives in populated areas. This is troubling. For when the ICRC takes up a cause, international consensus builds more quickly.

Landmines and Cluster Munitions

In 1996, the ICRC published a landmark paper, *Anti-personnel Landmines: Friend or Foe?*⁸ The humanitarian movement to ban landmines had been a longstanding campaign, and the ICRC's decision to enter the discussion so forcefully was not without significant influence. In 1997, the Convention on the Prohibition of the Use, Stockpiling, Production, and Transfer of Anti-Personal Mines and on Their Destruction, known informally at the Ottawa Treaty, was adopted. By 1998, 40 nations had ratified the treaty, triggering its entry into force. It became binding on March 1, 1999. Although the United States was opposed to the treaty and is not a signatory, the treaty has not been without effect. On September 23, 2014, the Barack Obama administration announced it would abide by key requirements of the Ottawa Convention with the exception of the Korean Peninsula.⁹

Similarly, the ICRC added its voice to the topic of cluster munitions and its influence to the Cluster Munition Coalition to great effect. After the 2005 military campaign between Israel and Hizballah, where both sides were accused of killing civilians with cluster munitions, the ICRC engaged on the topic. During a November 2006 conference in Geneva regarding the 1980 Convention on Certain Conventional Weapons, the ICRC sought to address the issue of limiting the use of cluster munitions.¹⁰ With work on the Oslo Accords beginning in earnest in 2007, the Convention on Cluster Munitions was adopted on May 30, 2008, in Dublin, Ireland, and was signed on December 3–4, 2008, in Oslo, Norway.¹¹ Once again, the ICRC's entry into the conversation and focus on the issue created a momentum that was too great to ignore. And once again, the impact would be felt in the United States. In 2008, despite apparent misgivings clear from his statement, Secretary of Defense Robert Gates announced that the United States would eliminate all cluster bombs that do not meet established safety and dud-rate standards by

the end of 2018.¹² Whether cluster munitions will be needed by the United States before 2018, or whether the technology will be developed that would reach the required dud-rates and allow cluster munition use after 2018, remains to be seen. As the date grows nearer, and near-peer adversaries continue to use cluster munitions, calls to delay the ban and extend the use of cluster munitions by the United States grow.¹³

The ICRC Enters the Explosives in Cities Debate

In February 2015, the ICRC convened a meeting of experts on the dangers of using explosives in populated areas, and they also published a short video on the topic.¹⁴ In June 2016, the ICRC published a fact sheet calling on signatories to the conventions and parties to armed conflicts to avoid using explosive weapons that have a wide impact area in densely populated areas due to the significant likelihood of indiscriminate effects.¹⁵ Whether the ICRC's added voice to the call to ban explosive weapons in populated areas will have the same pronounced effect as it had on the debates on landmines and cluster munitions is still to be seen. It is clear that their presence in the debate can add significant velocity to the speed at which the topic will be debated, and whether the issue may catch hold in the international community.

No person or nation of reason can be opposed to the noble goal of limiting civilian casualties. Similarly, we should all desire to avoid future refugee issues on the scale or scope of the Syrian crisis. At first glance, many NGOs and nations would appear only more reasonable and humane by coalescing around such a noble, humanitarian goal. By seeing the problem solely through the lens of the current conflicts, it seems to amplify the reasonableness of this approach. In a war waged within the limited borders of one nation, or combat against one limited foe—even a transnational terrorist foe—such calls seem to make sense. But the result may be more far-reaching and dangerous.

Although the ICRC's desire to bring focus to this issue is laudable, this is no time to come to the absolute conclusion that explosives should be banned in populated areas. In reality, the current proposal would protract a conflict, increase casualties on all sides, to include innocent civilians, and turn populated areas into rubble as a consequence of rooting out the enemy house to house. A ban of this nature is overbroad and might indeed portend even greater suffering, death, and loss of humanity. It would leave those we want civilian populations to be protected from—those terrorists and common enemies of mankind—as the only sure beneficiaries. Instead of banning explosives in cities outright, nations should ensure that military forces using explosives in populated areas consider in their proportionality calculus the possibility of cascading effects of weapon systems use and impacts on infrastructure and the inhabitability that results, further leading to refugees, to increased loss of life, and to greater human suffering. Such diligent and due care is reasonable and required by the law of war, and does not subvert its intentions. JFQ

Notes

¹ The Department of Defense (DOD) defines the *law of war* as “that part of international law that regulates the conduct of armed hostilities. It is often called the ‘law of armed conflict.’” See DOD Directive 2311.01E, *DOD Law of War Program*, May 9, 2006. See also DOD Directive 2311.01E, *DOD Law of War Manual*, June 2015: “*International humanitarian law* [IHL] is an alternative term for the law of war that may be understood to have the same substantive meaning as the law of war.”

² Jennifer M. O'Connor, “Applying the Law of Targeting to the Modern Battlefield,” remarks at New York University School of Law, November 28, 2016, available at <www.defense.gov/Portals/1/Documents/pubs/Applying-the-Law-of-Targeting-to-the-Modern-Battlefield.pdf>. Ms. O'Connor's remarks include this description of the punctilious nature of reviewing targets:

At one location, I observed a dynamic strike take place. I was in a meeting at the Joint Operations Center. A military lawyer, also present in the meeting, got called into the strike cell to work with the commander who was the target engagement authority—the



Marine sweeps for signs of improvised explosive devices during training aboard Camp Buehring, Kuwait, November 1, 2013 (U.S. Marine Corps/Christopher O'Quin)

ultimate decision maker. The proposed target consisted of two VBIEDS [vehicle-borne improvised explosive devices] that were completed but not yet on the move to where they would be detonated. Before authorizing the strike, the commander methodically worked through the analysis of whether the target was a valid military target. He asked lots of questions, including what information supported the assessment that these were VBIEDS, and that the people near them were ISIL [Islamic State of Iraq and the Levant] fighters, what weapons were available, whether any civilians were nearby and how his staff reached their conclusion to these questions, what the collateral effects would be, whether those collateral effects would be proportionate to the concrete

and direct military advantage expected to be gained by striking the target. Cameras scanned to get close-up views and also to pull back to provide a wide-angle view in order to see if there were other buildings or people nearby. This all moved very quickly, and involved input from a room full of people with different dedicated jobs. Ultimately, once the target engagement authority was satisfied, he asked the judge advocate whether he had any remaining legal or policy issues, and when the lawyer did not, the commander decided to carry out the strike.

³ Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law, Volume I: Rules* (New York: Cambridge University Press, 2005); see Rule

14: “Launching an attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated, is prohibited.” This premise of international law is the articulated principle of proportionality that applies in all armed conflicts at all times as a matter of both treaty law and widespread state practice. The Rome Statute of the International Criminal Court reflects this tenet in Article 8, which addresses war crimes in both international and noninternational armed conflicts.

⁴ Michael Newton and Larry May, *Proportionality in International Law* (New York: Oxford University Press, 2014), 117–119.

⁵ Beit Sourik Village Council v. the Government of Israel, HCJ 2056/04, ¶34 (2004), available at <http://elyon1.court.gov.il/files_eng/04/560/020/A28/04020560.a28.htm>.

⁶ “U.S. Sees Probable Role in Mosul Blast, Probe Under Way,” Reuters, March 28, 2017, available at <<http://cms.trust.org/item/20170328130001-hfg9g>>.

⁷ Orde F. Kittrie, *Lawfare: Law as a Weapon of War* (New York: Oxford University Press, 2016).

⁸ International Committee of the Red Cross (ICRC), *Anti-personnel Landmines: Friend or Foe?* (Geneva: ICRC, March 1996).

⁹ Department of State, U.S. Landmine Policy (2014), available at <www.state.gov/t/pm/wra/c11735.htm>.

¹⁰ Lionel Beehner, “The Campaign to Ban Cluster Bombs,” Council on Foreign Relations, November 21, 2006, available at <www.cfr.org/weapons-of-mass-destruction/campaign-ban-cluster-bombs/p12060>.

¹¹ The Convention on Cluster Munitions, available at <www.clusterconvention.org/>.

¹² DOD, “Cluster Munitions Policy Released,” press release, July 9, 2008, available at <<http://archive.defense.gov/releases/release.aspx?releaseid=12049>>.

¹³ Bob Scales, “Bring Back Artillery Submunitions; Russian Threat Too Great,” *Breaking Defense*, October 21, 2016, available at <<http://breakingdefense.com/2016/10/bring-back-artillery-submunitions-russian-threat-too-great/>>.

¹⁴ “Explosive Weapons in Populated Areas: The Consequences for Civilians,” International Committee of the Red Cross video, 1:49, June 15, 2015, available at <www.icrc.org/en/document/explosive-weapons-populated-areas-consequences-civilians>.

¹⁵ ICRC, “Explosive Weapons in Populated Areas—Factsheet,” June 14, 2016, available at <www.icrc.org/en/document/explosive-weapons-populated-areas-factsheet>.



United Nations Security Council unanimously adopts Resolution 2199 (February 12, 2015) condemning any trade, in particular of oil and oil products, with ISIL (Daesh), Al-Nusrah Front, and any other entities designated as associated with al Qaeda (Courtesy UN/Loey Felipe)

Follow the Money

Targeting Enemy War-Sustaining Activities

By Jeffrey Miller and Ian Corey

[O]ur attacks on [the Islamic State of Iraq and the Levant] economic infrastructure—from oil wells and trucks to cash storage to ISIL’s financial leaders—is putting a stranglehold on ISIL’s ability to pay its fighters, undermining its ability to govern, and making it harder to attract new recruits.

—SECRETARY OF DEFENSE ASHTON CARTER, APRIL 2016

Lieutenant Colonel (P) Jeffrey Miller, USA, is a Strategic Initiatives Officer for The Judge Advocate General, Department of the Army, at the Pentagon. Colonel Ian Corey, USA, is a Staff Judge Advocate at U.S. Army Cyber Command at Fort Belvoir, Virginia.

We see them every day on the highways and byways of America—18-wheel trailers and tankers hauling the goods and resources that drive the American economy. From this commerce, revenue is developed, and from this revenue,

taxes are drawn—taxes that ultimately provide the manpower and equipment for the Nation’s Armed Forces. If the so-called Islamic State (IS) were to attack these vehicles on America’s highways, we would call it terrorism. Take those same tankers, however, fill

them with oil drawn from or refined in IS-controlled fields or facilities, target them on a north-bound dirt road in Syria or Iraq, as U.S. and coalition forces have been doing in Operation *Inherent Resolve*, and what would we call it? We would call it the lawful use of force against a military objective. So, what is the difference?

The difference goes far beyond the obvious distinction in the quality and character of actors in these two scenarios. The difference lies in the extreme efforts that U.S. and coalition forces expend to identify targets as legitimate military objectives and minimize the potential loss of civilian life. In other words, the latter represents a lawful use of force because it is in strict compliance with the Law of Armed Conflict (LOAC).

Recent experience and the successful execution of a campaign to deprive IS of its war-sustaining oil revenue by the United States and its coalition partners provide a model for depriving an enemy force of the economic activity that it relies on to sustain its war efforts in a manner consistent with the LOAC. This article examines the targeting of enemy war-sustaining activities through the lens of successful efforts by the U.S.-led, counter-IS coalition in Iraq and Syria—Combined Joint Task Force—Operation *Inherent Resolve* (CJTF-OIR)—to disrupt IS ability to generate revenue through the sale of oil. Aided by a diligent and intensive intelligence effort, and guided by a commitment to the principles of LOAC, CJTF-OIR demonstrated that the economic activity an enemy relies on to sustain its war efforts can be lawfully targeted under LOAC, notwithstanding the skepticism of much of the world community.

A Minority View

Under the LOAC, *lawfully targetable military objectives* are “those objects which by their nature, location, purpose, or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.”²¹ The U.S. view,

which has its roots in the American Civil War when the Union Army targeted the Confederate cotton industry for destruction, is that this definition is broad enough to include certain economic activities of an enemy due to the contribution that such activities may make upon the enemy’s financial ability to sustain its war efforts.² This position, however, is far from universally held. In fact, “prior to the conflict with [IS], scholarly reviews suggested that the United States may be alone or almost alone among States in considering enemy war-sustaining capabilities legitimate military targets.”³

The majority position is generally captured by the Commentary of the International Committee of the Red Cross (ICRC) to Additional Protocol I to the Geneva Conventions regarding the meaning of “definite military advantage” within the accepted definition of a lawful military objective. Specifically, the ICRC commentary asserts that “it is not legitimate to launch an attack which only offers potential or indeterminate advantages.”⁴ Unlike traditional military objectives, such as enemy command and control nodes, vehicles, weapons, or soldiers, whose destruction, capture, or neutralization on the battlefield provides an immediate and definite military advantage, the advantage to be gained from the destruction of economic activity that sustains an enemy’s ability to make war is inevitably less immediate and usually speculative at the time of the attack. Furthermore, such activity is, by its nature if not its use, inherently civilian in nature, raising concerns regarding the LOAC principle of distinction. For these reasons, the U.S. position regarding the legality of targeting enemy war-sustaining activities is a minority one, opposed even by many of our allies.⁵

Another concern that some have raised regarding the legality of targeting war-sustaining activities is that the U.S. position could present a slippery slope, ultimately permitting the targeting of virtually any industry that arguably supports an enemy’s warfighting effort, even if only through the production of taxes. After all, taken to an extreme, virtually

all economic activity within a society could arguably be found to support that society’s ability to make war. The U.S. position regarding the lawfulness of targeting of such activities, however, is not absolute and, unlike the majority position that would prohibit such targeting under all circumstances, offers significant flexibility. As stated by the former Department of Defense General Counsel in a recent speech, “We do not believe categorically that we can target any and all cash or revenue-generating objects simply because of their nature. Rather, we consider each potential target on a case-by-case basis and evaluate it in light of the information we have available.”⁶ This flexible approach enabled CJTF-OIR to gain a definite and inarguable military advantage from the targeting of IS oil trucks that the majority position would have denied it.

Operation *Tidal Wave II*

IS has been characterized as the richest terrorist organization in history. It is funded in large part by extortion, seizure of funds from Iraqi state-controlled banks that have come under their control, and sale of looted ancient artifacts. Its most significant source of income in 2015, however, was from the sale of oil and gas drawn from the fields it captured in Iraq and Syria. The proceeds from these sales accounted for about half of IS’s estimated \$1 billion in annual revenue.⁷ The bulk of IS’s oil income funded its military operations, including the payment of its fighters and the purchase of weapons. There can be little doubt that this industry was making an effective contribution to IS’s military action.

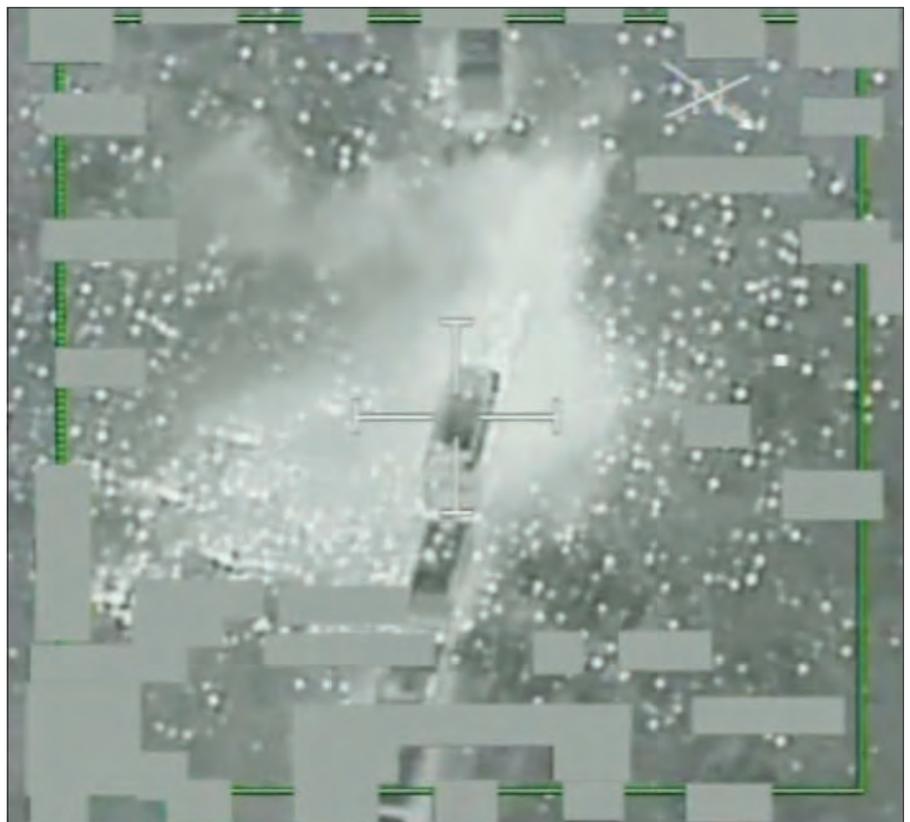
Even before CJTF-OIR stood up in October 2014, U.S. military forces and partner nations began targeting IS-controlled oil facilities. The first strikes, in September 2014, were on modular oil refineries that “[provided] fuel to run [IS] operations, money to finance their continued attacks throughout Iraq and Syria, and . . . [were] an economic asset to support future operations.”⁸ These efforts, however, were only marginally effective in damaging the IS war effort.

Over the course of a year of targeting oil facilities, including major oil fields in Iraq and Syria, the coalition determined that these strikes were having a minimal effect on the enemy. IS was frequently able to repair the damage caused by these strikes within a matter of days, or even hours. Moreover, the strikes did little to disrupt the oil trade itself that continued to fill IS coffers.

In October 2015, CJTF-OIR significantly expanded the targeting of IS's oil enterprise with the execution of Operation *Tidal Wave II*.⁹ As a phased operation, *Tidal Wave II* stepped up the number of strikes; sought effects that would disrupt operations for months instead of days; and, perhaps most significantly, expanded the target set to include the tanker trucks that formed the core of the oil distribution network and without which IS's oil trade could not flourish.

The decision to target the trucks used to haul IS oil represented a significant departure from prior practice and was not without controversy. Prior to *Tidal Wave II*, oil tankers—sometimes massed by the hundreds or even thousands at IS-controlled oil facilities—were specifically excluded from targeting in an abundance of caution related to concerns regarding the LOAC principle of distinction. This principle requires belligerents to distinguish between civilians and civilian objects on the one hand, and military objectives on the other. The former may not be targeted intentionally, while attacks must be strictly limited to the latter. These tankers presented three concerns regarding the principle of distinction: the trucks themselves, by their nature, were civilian objects; the drivers of these trucks were civilians; and the oil in the tanks became a civilian object that people relied on once purchased from IS. The former reluctance to target these trucks comported with the majority view disfavoring the targeting of war-sustaining objects.

Given the relative ineffectiveness of the targeting of IS oil facilities and the U.S. position that military objectives may include, under certain circumstances, war-sustaining activities that indirectly but effectively support and sustain the enemy's warfighting capability, CJTF-OIR



"Coalition Airstrike Destroys 283 Daesh Oil Trucks Near Al Hassakah and Dayr Az Zawr, Syria, to Degrade Daesh Oil Revenue," November 22, 2015 (Screenshot: Combined Joint Task Force—Operation *Inherent Resolve* video)

began to carefully analyze and reassess the targeting of these trucks. Supported by an intense intelligence effort and considering potential targets on a case-by-case basis, this analysis revealed the trucks that formed the basis of the IS oil distribution networks could become lawful targets.

Regarding the status of the trucks as civilian objects, under LOAC if a belligerent uses a civilian object for military purposes the object will lose its protected status and become a valid military objective. Based on the intelligence assessments available at the time, there was no doubt that IS was using its oil distribution network to primarily fund its military operations, and the trucks were the critical component of that network. Unlike other traditionally civilian economic activity, there was nothing speculative or unpredictable about the military advantage to be gained by the destruction or neutralization of this network. Accordingly, the trucks used to distribute IS oil were determined to have lost their protected status. CJTF-OIR went to great lengths to identify and target only those trucks that could reasonably be associated with an IS-controlled oil facility. This intensive intelligence effort enabled CJTF-OIR to distinguish between those trucks that were, by their purpose and use, definitely making an effective contribution to IS military action and those that may have been used for purely civilian purposes.

Similar to the trucks themselves, CJTF-OIR assessed the oil being hauled in the trucks as being used by IS for a military purpose. Like the Confederate cotton targeted for destruction by Union forces 150 years before, IS oil was the “great staple” funding military operations and therefore a valid military objective even once purchased from IS by the truck drivers. This analysis, however, was not the sole basis that CJTF-OIR relied on to justify the destruction of the oil being hauled in trucks associated with an IS oil facility. As a fallback position, CJTF-OIR assessed that even if the oil converted to a civilian object upon its sale to the truck drivers, its destruction would constitute collateral damage during the targeting of the trucks. Given IS reliance on the

revenue produced by its oil distribution network to fund its military operations, this collateral damage would never be excessive in relation to the advantage to be gained by the disruption of this network.

Finally, in reassessing the legality of targeting this activity, the status of truck drivers presented the greatest concern for CJTF-OIR, which recognized that it was virtually impossible to positively identify these drivers as members of IS. Doing so would have rendered them combatants subject to targeting. On the contrary, as the Chairman of the Joint Chiefs of Staff testified before the House Armed Services Committee, “We assessed that the majority of the truck drivers were, in fact, just people trying to make a living in the region.”¹⁰ While civilians can lose their protection under LOAC by directly participating in hostilities, the act of merely hauling oil purchased from IS did not constitute such participation. Accordingly, these individuals presented concerns regarding the LOAC principle of distinction.

While LOAC would not permit CJTF-OIR to intentionally target these truck drivers, it did not preclude their accidental injury or even death as collateral damage incident to strikes on the trucks or any other valid military objective associated with the oil facilities. As with its efforts to identify and target only those trucks associated with IS facilities, CJTF-OIR went to extraordinary lengths to minimize civilian losses incidental to the targeting of IS oil trucks. Specifically, CJTF-OIR took steps to mitigate the risk to drivers, providing pre-strike warnings such as leaflet drops, low aircraft passes, and strafing runs to encourage the drivers to abandon their trucks before becoming collateral damage.¹¹ Moreover, prior to authorizing any strike, the responsible commander had the duty under the LOAC principle of proportionality to evaluate each target to ensure that the anticipated civilian collateral damage was not excessive in relation to the concrete and direct military advantage anticipated by the strike.

Results

By all accounts, Operation *Tidal Wave II* has been a resounding success as of this writing. In January 2016, news outlets reported that IS was slashing the pay of its fighters by half, a move at least partly attributed to strikes on its oil enterprise.¹² By May 2016, Assistant Secretary of the Treasury for Terrorist Financing Daniel Glaser estimated that IS oil revenue had shrunk by half.¹³ More recently, in December 2016, after thousands of strikes on IS oil infrastructure and the destruction of over 1,200 oil trucks, the Special Envoy for the Global Coalition to Counter IS, Brett McGurk, briefed reporters by saying, “We’re destroying ISIL’s economic base. . . . They cannot pay their fighters.”¹⁴

Given the success of Operation *Tidal Wave II*, it is undeniable that war-sustaining activities like the Islamic State’s oil enterprise could constitute important military target sets. If targeted successfully, their destruction or neutralization could severely impact an enemy’s ability to engage in armed conflict and, hopefully, lead to an earlier cessation of hostilities. This success and the potentially positive outcome highlights the value of the U.S. case-by-case approach to the targeting of war-sustaining activities. Under the majority view, Operation *Tidal Wave II* would not have been permitted, despite the entirely predictable military advantage that such targeting produced while minimizing civilian losses. While it may well be that the United States has been “alone or almost alone” in its position regarding the targeting of war-sustaining activities, the success of the operation may represent a critical turning point in the world’s view of such actions. Other nations participating in the counter-IS fight have joined the United States in actively targeting the IS oil enterprise. They include two stalwart allies and a peer competitor: the United Kingdom, France, and Russia. Along with the United States, these participants represent four of the five permanent members of the United

Nations Security Council. If indeed the U.S. view remains the minority view, it is now a fairly significant one. Perhaps the time has come for the majority to reassess its position. JFQ

Notes

¹ Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Additional Protocol I), Article 52(2). Although not ratified by the United States, it considers this principle to be binding customary international law.

² Office of the General Counsel, *Law of War Manual* (Washington, DC: Department of Defense, June 2015), paragraph 5.17.2.3, available at <<http://archive.defense.gov/pubs/Law-of-War-Manual-June-2015.pdf>>.

³ Ryan Goodman, "Targeting 'War-Sustaining' Objects in Non-International Armed Conflict," *American Journal of International Law*, vol. 110 (June 2016), available at <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2783736>.

⁴ Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, International Committee of the Red Cross (Geneva 1987), paragraph 2024.

⁵ This debate was illustrated by the objection of our allies to the U.S. plan to target components of the Taliban's narcotics industry in Afghanistan. See Judy Dempsey, "Afghan Drug Fight Will Follow Law's Letter, NATO Says," *New York Times*, November 1, 2009, available at <www.nytimes.com/2009/02/11/world/asia/11iht-nato.4.20119005.html>.

⁶ Jennifer M. O'Connor, "Applying the Law of Targeting to the Modern Battlefield," remarks delivered at New York University School of Law, November 28, 2016, available at <www.defense.gov/Portals/1/Documents/pubs/Applying-the-Law-of-Targeting-to-the-Modern-Battlefield.pdf>.

⁷ Daniel L. Glaser, remarks delivered at Chatham House, London, England, February 8, 2016, available at <www.treasury.gov/press-center/press-releases/Pages/jl0341.aspx>.

⁸ "Department of Defense Press Briefing by Rear Adm. Kirby in the Pentagon Briefing Room," September 25, 2014, available at <www.defense.gov/News/Transcripts/Transcript-View/Article/606932>.

⁹ The operation was named after World War II's Operation *Tidal Wave*, which unsuccessfully sought to deliver a knockout blow to the German war effort by striking the oil refineries in Romania that produced the bulk of Nazi petroleum products.

¹⁰ "U.S. Strategy for Syria and Iraq and Its Implications for the Region," hearing before

the House Committee on Armed Forces, *YouTube.com*, December 1, 2015, available at <www.youtube.com/watch?v=SXT6U7tnaH4>.

¹¹ See, for example, Tom Vanden Brook, "Leaflets Prompt ISIL Truckers to Flee," *USA Today*, November 19, 2015, available at <www.usatoday.com/story/news/world/2015/11/19/isil-iraq-syria-oil-smuggling-leaflets/76065902/>.

¹² See, for example, Jose Pagliery, "ISIS Cuts Its Fighters' Salaries by 50%," *CNN.com*, January 19, 2016, available at <<http://money.cnn.com/2016/01/19/news/world/isil-salary-cuts/index.html?sr=fbCNN012016isis-salary-cuts0102AMVODtopLink&link-Id=20506180>>.

¹³ See Daniel L. Glaser's remarks in "Foundation for Defense of Democracies Holds a Discussion Entitled 'State of Play: Combating Today's Illicit Financial Networks,'" May 11, 2016, available at <www.defenddemocracy.org/content/uploads/documents/FDD_Glaser_Event_Transcript_May_2016.pdf>. Assistant Secretary Glaser attributed this to a combination of reasons, including a drop in the international price of oil and expanded counter-smuggling efforts, but primarily Operation *Tidal Wave II*.

¹⁴ White House, press briefing, December 13, 2016, available at <www.whitehouse.gov/the-press-office/2016/12/13/press-briefing-press-secretary-josh-earnest-and-special-envoy-global>.

New from NDU Press

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Strategic Forum 299
China's Future SSBN Command and Control Structure
by David C. Logan



China is developing its first credible sea-based nuclear forces. This emergent nuclear ballistic missile submarine

(SSBN) force will pose unique challenges to a country that has favored tightly centralized control over its nuclear deterrent. The choices China makes about SSBN command and control will have important implications for strategic stability. China's decisions about SSBN command and control will be mediated by operational, bureaucratic, and political considerations. A hybrid approach to command and control, with authority divided between the navy and the Rocket Force, would be most conducive to supporting strategic stability.



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NDU Press is proud to support the annual Secretary of Defense, Chairman of the Joint Chiefs of Staff, and JFQ George C. Maerz essay competitions. NDU Press hosted the final round of judging on May 18–19, 2017, during which 27 faculty judges from 14 participating professional military education institutions selected the best entries in each category. The First Place winners in each of the three categories are published in the following pages.

Secretary of Defense National Security Essay Competition



In 2017, the 11th annual competition was intended to stimulate new approaches to coordinated civilian and military action from a broad spectrum of civilian and military students. Essays were to address U.S. Government structure, policies, capabilities, resources, and/or practices and to provide creative, feasible ideas on how best to orchestrate the core competencies of our national security institution.

First Place

Travis W. Reznik

Marine Corps Command and Staff College

“The Risk of Delay: The Need for a New Authorization for Use of Military Force”

Second Place

Lieutenant Colonel Brian A. Denaro, USAF

National War College

“1995–1996 Taiwan Strait Crisis: U.S. Strategic Leadership”

Third Place

Colonel Paul Wayne Turnbull, Jr., USA

U.S. Army War College

“Asian Alliances in the Era of America First”

Chairman of the Joint Chiefs of Staff Strategic Essay Competition



This annual competition, in its 36th year in 2017, challenges students at the Nation’s joint professional military education institutions to write research papers or articles about significant aspects of national security strategy to stimulate strategic thinking, promote well-written research, and contribute to a broader security debate among professionals.

Strategic Research Paper

First Place

Lieutenant Colonel Benjamin Ray Ogden, USA

U.S. Army War College

“Butter Bar to Four Star: Deficiencies in Leader Development”

Second Place

Colonel Jeremiah Monk, USAF

Air War College

“End State: The Fallacy of Modern Military Planning”

Third Place

Lieutenant Colonel (P) Owen Gale Ray, USA

U.S. Army War College

“The Second Wave: Resurgence of Violent Islamic Extremism in Southeast Asia”

Strategy Article

First Place

Nathaniel Kahler

College of International Security Affairs

“Asadism and Legitimacy in Syria”

Second Place

Colonel James McNeill Efaw, USA

U.S. Army War College

“Countering Violent Extremists’ Online Recruiting and Radicalization”

Third Place

Major Benjamin Paul Wagner, USMC

College of Naval Command and Staff

“The New Great Game: Why India and Pakistan Joining the Shanghai Cooperation Organization Should Matter”

Joint Force Quarterly Maerz Awards

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Best JPME Today Article

Matthew F. Cancian

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Best Commentary Article

Gregory M. Tomlin

"#SocialMediaMatters: Lessons Learned from Exercise Trident Juncture," *JFQ* 82 (3rd Quarter 2016)

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New from NDU Press

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Strategic Forum 298

Cross-Functional Teams in Defense Reform: Help or Hindrance?

By Christopher J. Lamb



There is strong bipartisan support for Section 941 of the Senate's version of the National Defense

Authorization Act for 2017, which requires the Pentagon to use cross-functional teams (CFTs). CFTs are a popular organizational construct with a reputation for delivering better and faster solutions for complex and rapidly evolving problems. The Department of Defense reaction to the bill has been strongly negative. Senior officials argue that Section 941 would "undermine the authority of the Secretary, add bureaucracy, and confuse lines of responsibility." The Senate's and Pentagon's diametrically opposed positions on the value of CFTs can be partially reconciled with a better understanding of what CFTs are, how cross-functional groups have performed to date in the Pentagon, and their prerequisites for success. This paper argues there is strong evidence that CFTs could provide impressive benefits if the teams were conceived and employed correctly.



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The Risk of Delay

The Need for a New Authorization for Use of Military Force

By Travis W. Reznik

In September 2014, President Barack Obama announced a four-part plan to systematically destroy the so-called Islamic State (IS), a plan that included sustained military operations in Iraq,

into Syria, and “wherever [the terrorists] are.”¹ While President Obama welcomed congressional support for the effort in order to show the world that America was united in confronting this new danger, he claimed the executive branch had the authority to unilaterally approve such use of military force against IS.² The President’s justification rested on two congressional resolutions passed into law over a

dozen years earlier: the 2001 and 2002 Authorizations for Use of Military Force (AUMFs). Despite specifically authorizing the use of military force against those responsible for the 9/11 attacks and the terrorist threat posed in Iraq, respectively, the 2001 and 2002 AUMFs have remained the primary basis for our nation’s counterterrorism efforts abroad for over 15 years.³ Yet during this period, the world has witnessed the collapse of Saddam Hussein’s regime, death of Osama bin Laden, proliferation of new terrorist groups across the Middle East, Southeast Asia, and Africa, and the international expansion of IS.

President Obama’s decision to engage IS under the purview of these AUMFs—which came on the heels of Abu Bakr al-Baghdadi’s June 2014 announcement of the so-called Islamic caliphate—re-energized the debate among Congress, White House, and public regarding the need for a new AUMF to more appropriately and legally authorize U.S. military

Travis W. Reznik wrote this essay while a student at the Marine Corps Command and Staff College. It won the 2017 Secretary of Defense National Security Essay Competition.

force against the expanding IS threat. The Obama administration assessed that the existing AUMFs sufficiently authorized the use of military force against IS based on the group's former ties to al Qaeda as well as its presence in Iraq. Members of Congress assessed the connection between IS and al Qaeda was tenuous at best (since IS had not spawned until 2004) and began calling for a new AUMF to specifically authorize the use of force against IS. However, neither side of the aisle could agree on the proper scope, authorities, or limitations of a new AUMF, leaving Obama to finish out his Presidential term by continuing to justify the use of military force against IS and other terrorist organizations under the 2001 and 2002 AUMFs. Despite congressional recognition of the need for a new AUMF, given the questionable link between the existing AUMFs and the use of military force against IS, the status quo of relying on the 2001 and 2002 authorizations seemed good enough—until now.

Under the Obama administration, there was no pressing reason for Congress to compromise and draft a new AUMF because there existed no practical context for the courts to interpret the legality of President Obama's extension of the AUMF.⁴ However, with a new commander in chief who has vowed to ramp up efforts to wipe out terrorism and to "load Guantanamo Bay [GTMO] with some bad dudes" (including IS detainees), the practical context of judicial review now looms on the horizon.⁵ If President Donald Trump sends an IS detainee to GTMO, that detainee will almost certainly petition for habeas corpus. The courts could then determine that the 2001 and 2002 AUMFs neither accurately nor lawfully authorize today's broad use of force against IS and other current terrorist threats.⁶ Given that the use of military force remains an essential option to counter these threats to keep America safe, the country cannot risk an adverse judicial determination based solely on insufficient and outdated statutes that could force a suspension in counterterrorism efforts. Such an outcome would allow IS and other terrorist groups to regroup and refit, unnecessarily

placing Americans in danger and the country at great risk of attack.

President Obama's unilateral authorization to use military force against IS in 2014 highlighted the first two reasons why a new AUMF is necessary: the dangers of the expansion of Presidential power regarding the declaration of war, and the international ramifications of relying on outdated statutes to use military force abroad. The unwillingness of Congress to compromise on a new AUMF contributed to a third reason: leaving a new and inexperienced commander in chief who has an unpredictable agenda with an unprecedented amount of pre-existing authority. President Trump's vow to bring IS detainees to GTMO produced a fourth urgent reason for Congress to act.

After examining how the broad language of the 2001 and 2002 AUMFs afforded the executive branch the flexibility to use military force for so long, this article expounds on the above four reasons why a new AUMF is necessary. It then examines why previous AUMF draft attempts have failed at gaining bipartisan congressional approval and concludes with suggested language that is palatable to both sides of the aisle for a new AUMF in 2017.

While the language in a new AUMF must strike a measured balance between flexibility and limitation, it is the inherent message behind passing a new authorization that is now most important. As James Mattis wrote in March 2015, a new AUMF resolution supported by a majority of both parties in both houses of Congress would send an essential message of American steadfastness to our people and to the global audience.⁷ Congress must act with courage and vigor to reach a compromise and send the message that the Nation is still committed to the fight against terrorism. The time for partisan debate and delay has passed. A new AUMF will not only satisfy the requirement for Congress to be more involved when committing American troops to conflict, bolster U.S. credibility on the international stage, and help limit the new President, but also send a message of American resolve and unity regarding the

war on terror and ensure that Washington can lawfully continue using military force to keep the Nation safe.

Broad Language: Breaking Down the 2001 AUMF

Despite specifically authorizing the use of military force against those responsible for the 9/11 attacks, the George W. Bush and Obama administrations cited the 2001 AUMF⁸ to initiate or continue military or related action a combined 37 different occasions, in countries including the Philippines, Georgia, Yemen, Djibouti, Kenya, Ethiopia, Eritrea, and Somalia.⁹ Beau Barnes demonstrated how this was possible by breaking down the 2001 AUMF based on five reference points: object, method, time, place, and purpose.¹⁰ Using Barnes's approach in a more straightforward manner—that is, in terms of who, what, when, where, and why the statute authorizes military force—it becomes clear how Presidents Bush and Obama were able to apply it so broadly.

Regarding the "who," the 2001 AUMF authorizes the use of force against those nations, organizations, or persons who planned, authorized, committed, or aided the terrorist attacks that occurred on September 11, 2001. The resolution text itself is clear that Congress did not authorize the President to use military action against terrorists generally.¹¹ Yet because al Qaeda quickly claimed responsibility for the 9/11 attacks, any terrorist group that associates with it (as in the case of al Qaeda in the Arabian Peninsula) or was subsequently spawned from it (as in the case of IS) can be considered within the scope of the AUMF.¹² For example, in November 2016, the Obama administration made this determination for al Shabaab in Somalia, even though the group had not formed until 2006. President Obama stated because al Shabaab had publicly pledged loyalty to al Qaeda, made clear that it considers the United States an enemy, and was responsible for numerous plots, threats, and attacks against U.S. persons and interests in East Africa, the group was an "associated force" of al Qaeda and therefore within the scope of the 2001 AUMF.¹³

Moving on to the “what,” the AUMF authorizes the President to use all necessary and appropriate force, clearly meaning military force, and thus encompassing the use of lethal force. In compliance with international law, however, the modifiers *necessary* and *appropriate* do limit the President’s authority and ensure the force employed is consistent with what is “necessary and appropriate” to “prevent any future acts of international terrorism against the United States.” As Barnes explains, “Any force beyond that which is required to prevent future attacks would be unauthorized,” concluding that “if the United States had responded to the 9/11 attacks by reverting to the World War II-era practice of indiscriminate carpet bombing, that action would have been beyond that which was ‘necessary and appropriate’ to prevent future terrorist attacks.”¹⁴

In terms of the “when,” the AUMF contains no explicit reference to duration. The only temporal limitation is the nexus to the terrorist attacks that occurred on 9/11. As a result, the 2001 AUMF has seemingly authorized an indefinite use of force, as the mere passage of time (without any other factors) does not violate or terminate the authorization.¹⁵ Conversely, however, it is nearly impossible for the AUMF to last forever, as the number of actors actually responsible for the 9/11 attacks continues to diminish.¹⁶ Graham Cronogue best captures this catch-22, noting that because the conflict is not against a specific nation or well-defined organization, it is difficult to say when the conflict will end or what that end will even look like.¹⁷

The fourth aspect in examining the AUMF is its geographic scope. When Congress drafted the AUMF immediately after 9/11, it had an understandable lack of precise knowledge regarding the whereabouts for those responsible for the attacks. It therefore would have been difficult for Congress to have authorized military action in certain areas or specific countries. Consequently, the 2001 AUMF contains no geographic proscriptions or limitations. Therefore, if an organization that satisfies the 9/11 nexus is located in any foreign country, and that

foreign country is amenable to U.S. assistance, the President is legally authorized to use military force.¹⁸

The final aspect is the purpose. The 2001 AUMF authorizes the President to use force “in order to prevent any future acts of international terrorism against the United States.” While some observers view the “in order to” clause as a limiting function—in that the President can *only* use military force to prevent future terrorist attacks—others argue the clause bolsters a rhetorical and policy goal and opens the umbrella for a much broader use of military force.¹⁹ Others simply claim the “in order to” clause was included to satisfy the international law prohibition against reprisals.²⁰

After breaking down the 2001 AUMF, it becomes clearer how the statute’s language allowed the executive branch much room for broad interpretation. In December 2016, just weeks before leaving the White House, President Obama summarized his administration’s rationale in this regard. Arguing many of the points above, the 66-page memo titled *Report on the Legal and Policy Frameworks Guiding the United States’ Use of Military Force and Related National Security Operations* outlined why the 2001 AUMF sufficiently authorized military action against not only al Qaeda and the Taliban but also al Qaeda in the Arabian Peninsula, al Qaeda in Libya, al Qaeda in Syria, al Shabaab, and IS.²¹

Reasons for a New AUMF

President Obama’s December 2016 memo reinforces the first reason a new AUMF is necessary: the dangers regarding the expansion of Presidential power to unilaterally wage war. Although the Constitution allows the President as commander in chief to introduce U.S. Armed Forces into hostilities, the War Powers Act of 1979 *mandates* that the President *may only exercise these powers* pursuant to (1) a declaration of war, (2) specific statutory authorization, or (3) a national emergency created by attack upon the United States, its territories or possessions, or its Armed Forces. While an AUMF satisfies this second require-

ment, the same act also states that “the *collective judgment of both the Congress and the President* will apply to the introduction of United States Armed Forces into hostilities.”²² Section 1542 of the law clarifies further, stating that the President in every possible instance shall consult with Congress before introducing the Armed Forces into hostilities, and after every such introduction shall *consult regularly* with the Congress until they are no longer engaged in hostilities or have been removed from such situations.²³

Despite such a clear mandate, the broad language in the current AUMFs does not require the President to seek collective judgment from, or regularly consult with, Congress regarding the application of military force. The repercussions have transcended more than mere constitutional or academic debate. In 2011, for instance, the American Civil Liberties Union sued the Obama administration for conducting a missile strike to kill Anwar al-Awlaki in Yemen, claiming that the United States was not at war with Yemen, that Yemen did not fall under the 2001 AUMF list of targets, and that the President did not have a “blank check” to kill terrorists all over the world.²⁴ Similarly, in July 2016, U.S. Army Captain Nathan Smith filed a lawsuit against the Obama administration for the illegal use of force and targeting against IS, contending that the President violated the War Powers Resolution by issuing Smith an illegal order given that Congress never approved a war against IS.²⁵ These two anecdotes highlight and summarize the first reason for why a new AUMF is necessary: Congress requires a more active and frequent role in reauthorizing the President’s authorization of military force.²⁶

The second justification for adopting a new AUMF pertains to the international ramifications and inherent damage to U.S. credibility as a result of relying on outdated statutes and the seemingly limitless Presidential authority to use military force.²⁷ As previously noted, the 2001 AUMF is expressly linked to the 9/11 attacks and al Qaeda. As it stands, however, portions of al Qaeda



Marines move through poppy field on their way to Patrol Base Mohmon in Lui Tal District, Helmand Province, Afghanistan, April 17, 2012 (U.S. Marine Corps/Ismael Ortega)

have expanded into new groups not even around in 2001, organizations such as IS, al Qaeda in the Arabian Peninsula, Boko Haram, and al Shabaab.²⁸ Valid connections between these terrorist threats and those responsible for the 9/11 attacks are already logically stretched. This dilemma is certainly not lost on our allies, who look to the United States as a legitimate leader on the global stage. Secretary of State John Kerry reiterated this message while advocating for the passage of President Obama's 2015 draft AUMF against IS, stressing, "I know from talking with many Foreign Ministers all over the world that they study our debates, and these public signals matter to them. The coalition itself will be stronger with passage of this AUMF."²⁹

Along these same lines, the United States is an international standard bearer that sets norms that are mimicked by other nations. If other states were to claim the broad-based authority that the United States currently does—to

target people anywhere, anytime—the result would be chaos.³⁰ As a leading democracy, the United States cannot afford to act in ways that it is not prepared to see proliferate around the globe. For instance, U.S. strategy regarding China focuses on binding China to international norms as it gains power in East Asia. By continuing with the status quo, the United States is not only discrediting its own legitimacy but also potentially facilitating similar destabilizing actions by China and countless other nations around the world.³¹

The third reason for needing a new AUMF pertains to the recent transfer of power from President Obama to Trump. President Obama had been in office for more than 5 years when he made the calculated decision to take military action against IS under the 2001 AUMF. This meant he had 5 years of experience as the commander in chief; Trump has little to none. Yet because Congress failed to pass a new AUMF during the final years of the

Obama administration, Trump entered office with the same latitude to wage war around the world and can point to the precedent set by the Obama administration to do so.³² Although Trump has pledged to avoid nation-building and regime change, he has simultaneously vowed to ramp up efforts to wipe out terrorism and "knock the hell out of [IS]."³³ As Representative Barbara Lee (D-CA) highlights, "For an inexperienced President who tweets and gets angry to have broad war-making power, it's a dangerous place to be."³⁴

In his few months in office, Trump signed 25 executive orders—several of them controversial—and has demonstrated a tendency to lash out against those who oppose him.³⁵ This behavior has caused concern among even Republican Congressmen. As Representative Jim Hines (R-CT) admitted, "Some of us are really worried about Trump."³⁶ Trump stepped into the White House with an unprecedented amount

of pre-existing authority, an unpredictable agenda, and limited experience as commander in chief. In the war against terrorism, Congress must pass a new AUMF to help define and codify his limits.³⁷

Finally, the most pressing reason lies in the Trump administration's drafting of an executive order that would direct the Pentagon to bring future IS detainees to GTMO.³⁸ As Jack Goldsmith explains:

President Obama extended the 2001 AUMF to apply to IS over two years ago, yet there was no practical context in which a court could consider the legality of the President's interpretation. But if President Trump follows through on his order to bring IS detainees to GTMO, then suddenly President Obama's extension of the AUMF to IS will be subject to judicial review. The moment the Trump administration brings an IS detainee to GTMO, that detainee will almost certainly seek habeas review in court.³⁹

Goldsmith continues, "It is easy to imagine a habeas court ruling that the President does not have the authority to detain a member of IS because the 2001 AUMF does not extend to IS."⁴⁰ The United States would then run the risk of the courts declaring all of the President's military efforts against IS under the 2001 AUMF to be unlawful.⁴¹ Such a determination could force the military to suspend all counterterrorism efforts against IS—therefore allowing the group to rebuild, refit, and re-attack.⁴² Since IS remains a threat to the United States, Congress must ensure the President and our troops maintain the legal authority to degrade and destroy the group—and must act *before* Trump brings any IS detainee to GTMO.

A Divided Congress: Why Previous AUMF Drafts Failed

For nearly 3 years now, Congress has recognized the need to update the AUMFs, yet remains unable and unwilling to compromise on how the resolution should ultimately read. This section examines three of the recent AUMF draft attempts and highlights what

caused Congress to balk at passing any of them into law.

The first attempt, the Authorization for Use of Force Against the Organization Called the Islamic State, arose immediately after Obama's September 2014 announcement regarding his planned use of force against IS.⁴³ The first problem with this draft is that it set a geographic boundary to that of Iraq, which was quite limiting considering the spread of IS to Syria, east and central Africa, and beyond. Furthermore, because it was only specific to IS, it mentioned no such repeal of the previous AUMFs and in fact required that the 2001 and 2002 AUMFs remain intact in order to continue authorizing military force against al Qaeda and its associates. Finally, the draft did not contain any temporal limitation or "sunset clause."⁴⁴ This meant neither Congress nor the President would be committed to revisit the nature and scope of the war against Islamic terrorists on a regular basis.⁴⁵ Given these shortfalls, Congress remained divided on how the bill should read and remained hesitant to make such a serious vote in the lead-up to the midterm elections and therefore made no effort to pass the bill.⁴⁶

In February 2015, with 79 percent of Americans believing that the President should obtain congressional approval before deploying forces against IS, Obama submitted his own AUMF draft to Congress.⁴⁷ This draft aimed to authorize the use of military force against IS until 2018 and would have superseded the 2002 AUMF, yet it included no mandate for the President to routinely report to Congress where and when he had authorized the use of military force.⁴⁸ It also precluded the use of the Armed Forces in enduring offensive ground combat operations.⁴⁹ Republicans cringed at this limitation; as law professor Robert Chesney explains, "Whether it is constitutional or not, any limitation on the role of ground forces in the AUMF must not create unnecessary legal uncertainty for commanders. [President Obama's] vague prohibition on enduring offensive ground combat operations violates this principle."⁵⁰ The importance of maintaining flexibility for the possible use of

additional military capabilities was further underscored by Defense Secretary Robert Gates, who warned that there must be "boots on the ground" if there is to be any chance of success in the strategy against IS.⁵¹

As with the 2014 draft, Congress was again divided. Many Democrats believed a new AUMF would lead to wider and more extensive military involvement, while many Republicans feared an AUMF would be too limited and would tie the President's hands in the fight against a significant new enemy.⁵² Even House Speaker John Boehner (R-OH), who had spent months calling on Obama to send Congress his AUMF draft, dismissed it as being too restrictive.⁵³ As a result, Congress made no effort to pass the legislation, and the bill died within 2 months.

Several subsequent proposals over the next year similarly collapsed in partisan dispute, including Representative Adam Schiff's (D-CA) December 2015 resolution.⁵⁴ Goldsmith argues the Schiff bill was a great attempt as it remained "substantively neutral (it gave the President the same authorities he currently claimed to possess) yet procedurally constraining (it forced the President to communicate more with Congress about the conflict and forced Congress to be more involved)."⁵⁵ Schiff's draft authorized the use of military force against al Qaeda, the Taliban, IS, and associated forces; was authorized for only 3 years; and allowed the President to deploy combat ground troops. It also mandated that the President submit to the appropriate congressional committees and publish in the Federal Register a list of entities against which such authority had been exercised and the geographic location where such authority had been exercised at least once every 90 days.⁵⁶ This latter requirement promotes Presidential accountability to ensure that Members of Congress and the public know precisely against whom, and where, the United States is at war.⁵⁷ Most importantly, it superseded both the 2001 and 2002 AUMFs.⁵⁸

Despite the progress of the Schiff bill, Congress yet again could not compromise. Democrats continued to push for



Suspected al-Shabab militants wait to be taken away for interrogation during joint night operation between Somali security services and African Union Mission in Somalia forces in Mogadishu, Somalia, May 4, 2014 (Courtesy UN Photo/Tobin Jones)

tighter restrictions, while Republicans were fearful of curbing the President's ability to fight terrorists. Despite recognizing the 2001 and 2002 AUMFs were not a perfect fit for the campaign against IS, Congress seemed content to permit the de facto war against IS to continue without a formal declaration.⁵⁹

Proposed AUMF Language for 2017

Having examined the flaws of the existing drafts, while also demonstrating the dire need for a new AUMF, the question now becomes what does it mean to get a new AUMF right. The answer is not legislation that would grant the executive branch unbounded powers more suited for traditional armed conflicts between nations, but rather a framework that will support "a series of persistent, targeted efforts to dismantle specific networks of violent extremists that threaten America."⁶⁰ As such, this final section identifies the components that are neces-

sary in a new AUMF—a compromise from earlier draft attempts that is palatable to both sides of the aisle.

First and foremost, a new AUMF must supersede the 2001 and 2002 AUMFs. Since the inception of those bills, the war on terror has expanded to new groups and regions. The link between 9/11 and the Iraqi invasion to the legal justification for using military force today is becoming only more tenuous. The new draft should not include a specific reference to any previous attacks (as the 2001 AUMF referenced 9/11) but instead should be oriented toward preventing future attacks.

The draft should authorize the use of military force against all foreign terrorist organizations that have demonstrated the intent and capability to target the United States. At present, this includes IS and its branches, the Taliban, al Qaeda, as well as their affiliates and associates such as Boko Haram in Nigeria and al Shabaab in east Africa. The AUMF

should clearly delineate that if the military or Intelligence Community reasonably proves that a group has the capability, motive, and intent to attack the United States, then the use of military force should be authorized. The President—as commander in chief of the military—along with the Joint Chiefs of Staff and National Security Council should be the final arbiters in deciding if this threshold is met. Furthermore, as long as the underlying factors of a group remain unchanged—such as the personalities, activities, affiliation, and goals—any terrorist group simply changing its name can likewise be targeted under the AUMF. This would eliminate the possibility of the enemy using the rules and regulations of the AUMF to its advantage, which in this case would be simply changing names in order to escape deliberate targeting.

The new AUMF should clarify that the geographic reach of authorized military force against terrorists is global—it would reach every country but the



Airman assigned to 340th Expeditionary Air Refueling Squadron communicates with KC-135 Stratotanker pilots above Southwest Asia, July 20, 2017, in support of Operation *Inherent Resolve* (U.S. Air Force/Trevor T. McBride)

United States itself. A restriction to certain countries is unnecessary and fraught with diplomatic landmines. While the United States would not likely use military force in friendly states permitting effective cooperation with authorities, explicitly excluding allies from the authorization of military force would beg the question of why other countries were not similarly included. This would force the United States to publicly draw lines, needlessly alienate certain allies, and run the risk of creating safe harbors in certain areas for terrorists.⁶¹ As a limiting clause to this seemingly blank check, the AUMF should include language that the authorization of force would be limited only to places where U.S. military force could be used consistent with applicable international law concerning sovereignty and the use of force.⁶² Finally, the new AUMF should not include any reference to specific nations; an armed conflict with a country poses far too many risks for the executive branch to authorize alone. If an attack against the United States or its allies calls for a response similar to that of Afghanistan in 2001, Congress should specifically authorize that military action independently from the AUMF statute.⁶³

Moving on to the temporal limits of a new AUMF, the statute must include a sunset clause. Such a provision would satisfy the War Powers Act by ensuring that Congress, and not just the executive branch, would have a say regarding when and where the military engages in conflict. A sunset clause of 3 years would keep military options flexible in response to threats but would “pressure the [Office of the President] on a regular basis to explain the nature of the conflict and the reasons why it must continue, as well as pressure Congress to exercise its constitutional and democratic responsibilities to deliberate about and vote on (or at least face) the issue.”⁶⁴

To ensure sufficient oversight, a new AUMF must mandate that the President submit to the appropriate congressional committees within 60 days a list of entities and locations against which he has authorized and exercised military force. Finally, given that the enemy is constantly adapting, a principal challenge that the new AUMF must overcome is ensuring it does not become obsolete.⁶⁵ The AUMF must therefore include a provision that allows amendments to be added to sufficiently address new and unforeseen threats (subject to notification

to Congress), insofar as the new threats satisfy the aforementioned criteria of both intent and capability to target the United States.

Finally, in terms of what force the President is authorized to use, a new AUMF should communicate that while the President has the authority to use all necessary and appropriate force, the United States will only use lethal force as a last resort. Such lethal force would be as discriminating and precise as reasonably possible and would be a partnered effort with the host nation’s counterterrorism strategy.⁶⁶

Conclusion

Over the past several years, the task of adopting a new AUMF has proved easier said than done. With multiple viewpoints and competing arguments on the proper scope of a new AUMF, there may never be a perfect solution. Yet as terrorist groups continue to operate and proliferate across the globe and continue to threaten our freedoms, the use of military force is often the only option to counter these threats. Congress must reach a compromise to update the law and accurately reflect this reality; the time for partisan debate and delay has passed. Both sides of the aisle may not agree on every word or clause of a new AUMF, but they must acknowledge that a new AUMF will send the message that America remains united and committed to the fight against terrorism.

Congress must replace the 2001 and 2002 AUMFs with a new statute that strikes a balance between flexibility and limitation. Doing so will satisfy the requirement for Congress to be more involved when committing American troops to conflict, bolster U.S. credibility on the international stage, and help guide a new and inexperienced President. More important, a new AUMF will send a message of American steadfastness and unity in the fight against terrorism, and ensure that the United States can continue to lawfully use military force to keep America safe. A new AUMF may not make the war on terror any different, but the absence of one most certainly will. JFQ

Notes

¹ Barack Obama, “Statement by the President on ISIL,” Washington, DC, September 10, 2014, available at <<https://obamawhitehouse.archives.gov/the-press-office/2014/09/10/statement-president-isil-1>>.

² Ibid.

³ “Authorization for Use of Military Force,” SJR 23, 107th Cong., Congressional Record 147, daily ed. (September 18, 2001): Public Law 107-40; “Authorization for Use of Military Force Against Iraq Resolution of 2002,” HJR 114, 107th Cong., Congressional Record 148, daily ed. (October 16, 2002): Public Law 107-243.

⁴ Jack Goldsmith, “The Practical Legal Need for an ISIL AUMF,” *Lawfare*, February 8, 2017, available at <www.lawfareblog.com/practical-legal-need-isil-aumf>.

⁵ Ibid.

⁶ Ibid.

⁷ James Mattis, “Using Military Force Against ISIS,” The Hoover Institution, March 4, 2015, available at <www.hoover.org/research/using-military-force-against-isis>.

⁸ To avoid unnecessary duplication, this analysis focuses solely on the 2001 Authorization for Use of Military Force (AUMF) as it has been the primary authorization for the use of military force abroad. Many of the same interpretations hold true for the 2002 AUMF, albeit for Iraq versus al Qaeda and the Taliban.

⁹ Matthew C. Weed, *Presidential References to the 2001 Authorization for Use of Military Force in Publicly Available Executive Actions and Reports to Congress*, Congressional Research Service (CRS) Memorandum (Washington, DC: CRS, May 11, 2016), 2, available at <www.hsdl.org/?abstract&did=792875>.

¹⁰ Beau D. Barnes, “Reauthorizing the ‘War on Terror’: The Legal and Policy Implications of the AUMF’s Coming Obsolescence,” *Military Law Review* 211, no. 57 (Spring 2002), 4–6.

¹¹ Ibid., 4.

¹² *Report on the Legal and Policy Frameworks Guiding the United States’ Use of Military Force and Related National Security Operations* (Washington, DC: The White House, December 2016), 5, available at <www.justsecurity.org/wp-content/uploads/2016/12/framework-Report_Final.pdf>.

¹³ Ibid.

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U.S. Coast Guard officer candidates aboard Coast Guard Barque *Eagle* haul on fore upper topsail brace during sail stations at sea in Atlantic Ocean, September 16, 2013 (DOD/U.S. Coast Guard)

Butter Bar to Four Star

Deficiencies in Leader Development

By Benjamin Ray Ogden

It's incredibly easy . . . to work harder and harder at climbing the ladder of success only to discover it's leaning against the wrong wall.

—STEPHEN R. COVEY
The 7 Habits of Highly Effective People

Lieutenant Colonel Benjamin Ray Ogden, USA, wrote this essay while a student at the U.S. Army War College. It won the Strategic Research Paper category of the 2017 Chairman of the Joint Chiefs of Staff Strategic Essay Competition.

Stephen Covey's insightful message reminds us that individuals and institutions create inefficiencies when their well-intentioned efforts veer from the direction of the desired destination. In national security parlance, unchecked ways and

insufficient means induce a hefty risk to achieve desired ends. Just such a disparity exists in the U.S. military between the various officer development programs and their ultimate objective: exemplary strategic leaders. Attaining the title of strategic leader depends on

mastering three advanced competencies: conceptual competency dealing with specific thinking skills, technical competency that includes knowledge of external systems, and the interpersonal competency of consensus-building and communication.¹ Yet the road military officers travel to acquire these competencies often contains hidden detours and obstacles that prevent them from becoming effective, relevant, and successful general officers within the strategic environment. Operating in this environment means curbing tactical expertise in order to deal with intense complexity, great uncertainty, unsolvable problems, vast time spans, interdependent systems, and dissimilar cohorts.² Fellow stakeholders are often civilian professionals with different educational and professional backgrounds, divergent thought processes, conflicting interests, and little experience operating in a tiered structure. Therefore, an officer's developmental process must include mastering civilian-military aptitude throughout the lifespan of a career, including a shift in standard mindset and actions so he or she is capable of keeping ahead of fast-moving complexity.³

This article carefully unpacks the ideas that rigid cultural norms, faulty officer management practices, and significant flaws in professional military education (PME) generate damaging gaps in the development of commissioned Army officers in the Active component. In fact, the analysis indicates that these discrepancies delicately nudge the Army toward sculpting its junior officers into tactically savvy and combat-effective generals instead of expert strategic leaders.⁴ The article concludes with recommendations aimed at reforming complacent systems, challenging conventional thinking, and rebalancing components of leader development models so all future flag officers emerge as proficient sources of strategic competency. Even though the study specifically indicts the Army's leader development program, the lessons can have implications that each Service should consider for the developmental well-being of its own officers.

Cultural Impacts to Officer Development

Cultural elements most influential to officer development center around the overwhelming importance placed on operational experience as the mainstream career pathway and the deep-rooted institutional behaviors that discourage critical thinking by its leaders. Most officers will acknowledge the validity of a balanced approach for healthy development, but cultural forces have eroded this balance, tipping the scale in favor of the operational domain. This particular domain encompasses training activities that units undertake, experiences within an operational or deployed setting, and education gained through unit professional development programs and local special skills courses.⁵ It equates to what officers gain while "online" in a unit or, more broadly, within their career track.

Prolonged wars in Iraq and Afghanistan coupled with Servicemembers' patriotic duty to deploy in those wars naturally affect the emphasis for operationally focused learning. For a generation of officers, operational experience, training, and education have usurped all other forms of development and eventually appear as an unofficial condition in the selection process for promotions.⁶ This promotion indicator uncovers a belief that being tactically and operationally capable equates to being a successful flag officer and explains why officers hesitate to take assignments that are nonoperational for fear of falling behind their peers and jeopardizing the possibility to serve as a flag officer. A narrow-minded operational pattern develops among emerging leaders, even though "approximately 65 percent of one-star billets, 80 percent of two-star billets, 82 percent of three-star billets and 92 percent of four-star billets are nonoperational enterprise management positions."⁷ In essence, a skewed path for success, accompanied by misguided developmental criteria, emerges even though comprehensive development remains the gold standard for producing future senior leaders.

This operational fetish also leads to anti-intellectualism among Army leaders and their Service counterparts. Diverting from the operational field into assignments that build strategic thinking ability, such as advanced civil schooling, teaching, or fellowships, is traditionally undesirable and considered damaging to an officer's career.⁸ Many officers and, to some degree, promotion boards begin to believe that stepping away from unit leadership assignments to focus on individual academic development is an indictment of the officer's leadership abilities. A profound example of that assertion emerged recently when the Army failed to select four company-grade officers for promotion when their selection for advanced academic scholarships kept them from taking the traditional route of serving in tactical units.⁹ This operationally focused side of Army culture appeared in a broader scope as well. The Army's operational tempo over the years has caused myopic inclinations toward equipment modernization and readiness over restructuring its own PME system.¹⁰ These cases reaffirm the belief that time operating in units and operational capability are more valuable to an officer's leadership development than intellectually rigorous opportunities that result in strategic capacity.

Complacency toward officer self-development and assignment culture also enhances the gravitation toward operational development. Unlike enlisted leaders who follow a structured self-development model, Army officers' self-development consists solely of "self-initiated learning" to meet personal training, education, and experiential goals.¹¹ Because officers are strictly in charge of their own self-development, they tend to exert more effort toward succeeding in their current or next assignment versus following a tailored approach that nests with long-term career objectives culminating in strategic aptitude. In fact, over half of surveyed officers confirm that their most selected activities include professional reading, improving a skill they already mastered such as physical fitness, or networking.¹² These data imply that officer self-development basically

merges with operational development. Moreover, the length of assignment tours within military culture creates conditions where leaders feel compelled to lean heavily on operational topics as a matter of immediate self-interest. Officers generally do not spend more than a year in the same position and cannot be expected to have immediate proficiency with all aspects of a new job. Becoming proficient as a leader in these positions requires most of an inexperienced officer's time; therefore, developmental habits form relating to near-term operational tasks. Cultural aversion to intellectualism and neglected self-development end up pushing officers toward a singular focus on operational skills, leaving them critically shortchanged beyond the tactical realm.

While a mindset stuck in operational mode impedes officer development, the unwitting discouragement of critical thinking as a cultural anchor nearly derails it. Some psychologists define *critical thinking* as "reasoned thinking with a purpose" that "depends upon three core abilities: appreciating that your own opinions may be wrong; accepting statements as true even when they conflict with your own views; and temporarily adopting an initial position with which you disagree, and then reason from that starting point."¹³ Senior military leaders who embrace and master this art should have the ability to recognize their own biases, avoid fallacies, and objectively challenge assumptions when faced with new or existing ideas. These skills are vital for leading in the uncertain and rapidly changing environment where conventional solutions may be obsolete. But the Army's track record in this area presents a discouraging pattern.¹⁴ Past studies presented to the House Armed Services Committee have uncovered significant officer deficiencies in critical thinking due to lapses in officer development.¹⁵ Being able to apply objective and reasoned thinking requires constant practice, which expands beyond its use in academic settings alone. Even when used in Army academic institutions, the faculty only delivers critical thinking concepts and knowledge to students versus instilling in them how to apply them.¹⁶ If successful

and routine immersion of this practice into an officer's career is paramount, then the operating environment and culture need to allow reasonable skepticism to flourish; however, overt skepticism in any military setting clashes with conventional and traditional behavior.

Not unlike the other Services, the U.S. Army thrives on standardization and conformity, both as official and cultural customs, to reinforce disciplined behavior.¹⁷ These norms invariably conflict with the freedom to objectively assess an idea or situation, particularly if the idea is a standard practice. In organizations like the Army, a fine line exists between being skeptical in the name of critical thinking and nonconforming to embedded values such as duty and loyalty. Since pressures to conform in a group are substantial, failure to do so can result in being perceived as insubordinate or undisciplined, or even being sanctioned or expelled.¹⁸ Likewise, military organizations pride themselves on having a steadfast belief in traditions. Some traditions, such as rowdy military balls, host calling cards, and unit slogans, represent superficial and benign experiences. More operative traditions tend to originate from collective experiences relating to the creation and sustainment of an effective fighting organization that wins wars.¹⁹ These types of practices contribute to what makes organizations like the Army cohesive, so an officer showing skepticism toward them through critical thinking methods risks professional isolation and even survival in combat situations.²⁰ This phenomenon could render officers incapable of divorcing themselves of those norms even when overwhelming evidence exposes a contrary viewpoint. As a current consideration, one need look no further than the Army's continued use of an obsolete physical fitness test established in 1985, even though significant advances in physical training have emerged as better assessments of physical readiness.²¹ In the end, the culture of conventionality and tradition outweighs the urge to truly examine ideas, leading to a significant deficiency in the cognitive methods prized later in a senior leader's career.

Complementing conformity and tradition within Army culture, as well as military culture writ large, is the dependence on doctrine and regulations. As of the publication of this article, the Army Publication Directorate Web site displays 537 Army regulations and 16 Army doctrine publications in inventory, and that excludes hundreds of volumes of joint doctrine, local regulations, various degrees of standard operating procedures, and multi-echelon policy letters that lay the operating framework for Soldiers.²² Providing top-down directives for nearly every aspect of military life breeds outsourced thinking and makes it improbable that officers will spend time objectively questioning why or how something is done. Even if doctrinal leeway existed, most officers possess an innate aversion to the intellectual exploration that enables the critical thinking process. Army officers, in particular, tend to exhibit low levels of openness and high levels of decisiveness, traits that benefit leaders at the tactical level but ultimately cripple those who reach the strategic level.²³ In effect, the gross overkill of prescriptive thinking is both born from and satisfies the pervasive personality type of the officer population while also reinforcing a rigid and convinced mindset that is antithetical to challenging ideas. Even though the highlighted cultural artifacts play a large role in an officer's development, misguided talent management procedures lend further evidence of an inefficient leader development system.

Officer Management Practices at Play

It is safe to assert that several officer management practices present a different but no less serious obstacle to the development of strategic leaders. Assessments in 2014 found that only "46 percent of Active component leaders rated the Army effective at supporting the development of individuals through personnel management practices such as evaluations, promotions, and assignment selection."²⁴ Anyone looking at officer management influences must begin with the most significant document in a career's paper trail and center-

piece to officer promotions and selections, the Officer Evaluation Report (OER). Unlike enlisted leaders, officers never personally appear in front of promotion boards and selection panels. Boards and panels in charge of selecting officers for ranks and commands only conduct file reviews.²⁵ By far, the most important document in the file that determines the fate of the officer is the OER because board members spend the most time reviewing it, and it gives them insight into the leader's level of performance and potential compared to other officers.²⁶ The tyranny of the OER in determining the success of an officer should not be underestimated, so evident flaws within its structure and use have critical consequences for the quality of leader that emerges.

Structural flaws in evaluations discourage supervisors and senior raters from citing potential strategic leadership qualities that go beyond the number of tactical tasks accomplished. This defect, in turn, encourages officers to focus on tasks they accomplish and ignore the strategic leader attribute of being reflective about themselves and their experiences.²⁷ The danger of reinforcing accomplishments in this manner contributes to the development of an unwanted fixed mindset versus the more adaptable growth mindset. Someone with a fixed mindset believes their "abilities are predetermined and largely unchangeable," while a growth mindset is "the belief that one can cultivate and improve upon their abilities through practice and effort."²⁸ Constantly being recognized only for what one accomplishes causes the individual to develop a fear of failure and potentially avoid challenges. Conversely, being recognized for one's effort alleviates the fear of failure and promotes resiliency in the face of difficult situations, like those that resoundingly persist at the strategic level.²⁹ Fixed mindsets encouraged through OER practices can cripple officers once they become strategic leaders because problems at that level are fluid and virtually unsolvable. Our leaders must mentally evolve throughout their careers to focus on getting processes right versus seeking a clear win, but evaluations

reinforce the performance outcome instead.

Alongside ill-constructed OERs rests poor utilization of broadening assignments as developmental opportunities for officers. Broadening assignments expand an officer's experience and introduce new ways of thinking to ensure the development of multifunctional skills. This technique works, and many private companies achieve impressive results by using similar initiatives to elevate the thinking capacity of their leaders. Executives at General Electric, for instance, participate in programs that immerse them in underdeveloped countries with the purpose of exposing them to unique experiences in order to "promote reflection and self-awareness" as a developmental tool.³⁰ As a result, broadening offsets parochialism and a myopic mindset for those bound to lead in unpredictable environments by opening their mental approach to addressing challenges.

Unfortunately, trends for mind-broadening opportunities have been decreasing for many Army generals since the beginning of the conflicts in Iraq and Afghanistan.³¹ The most obvious conclusion for this shortfall is simply that assignments supporting ongoing operations in the two major conflicts took priority. Operational assignments also dominate the landscape over broadening assignments for cultural reasons as witnessed through official administrative directives. Manning guidance issued after the announcement of troop withdrawals in Iraq and Afghanistan still prioritizes operational manning and only mentions broadening opportunities for officers as an objective versus a directed manning requirement.³² The tone of these official documents sends a clear signal that broadening assignments are secondary options and offers troubling insight into an institutional aversion to prioritizing these mentally enriching assignments.

Even though human resource managers stand alone as the primary executors of officer assignments such as broadening and joint opportunities, mentors have a significant role in managing an officer's career. Officers will use mentors to seek guidance and wisdom for career

assignment paths that will eventually land them in the highest strategic-level positions. This level of responsibility gives mentors a great amount of influence over the proper development of an officer. Yet not all officers subscribe to the idea of having a mentor to assist them in their development or career management. Army-specific surveys conducted in 2014 determined that only 57 percent of company-grade officers and 56 percent of field-grade officers reported actually having a mentor.³³ Unlike supervisors who have direct responsibility for coaching their subordinate officer, an officer protégé voluntarily seeks out and chooses a mentor based on trust and experience level. Therefore, this large minority of unmentored officers maneuver through their careers alone or with help solely from rotating supervisors and assignment managers. As a result, unilateral management techniques and inexperience cause officers to miss developmental opportunities or veer off track over a long career, while jeopardizing their full potential to serve strategic positions.

Those officers who do participate in the mentorship process face different challenges to their development. In general, mentors offer many more years of seniority and experience that greatly benefit junior officers. The vast difference in experience should be the most advantageous part in the relationship.³⁴ However, a mentor's guiding compass entails experiences that assisted in their path to success years before but that may no longer be the best path for an officer today. Mentors can unwittingly perpetuate poor choices of assignments because those types of assignments fit an outdated career model. In particular, successful commanders fall victim to this phenomenon. Historically, mentors have counseled the most successful commanders to seek more difficult positions in large operational commands and headquarters as optimal preparation for future promotion and command, simply because that path worked for them.³⁵ In addition, senior officers have a tendency to tether junior officers to them at new assignments because these subordinates have proved loyal, competent, and trustworthy in the



Upperclass midshipman gives briefing to first-year midshipmen participating in annual Sea Trials at U.S. Naval Academy, May 2012 (U.S. Navy/Chad Runge)

past. This technique potentially benefits senior officers and the units they serve, but it can severely obstruct junior officers from new experiences and ways of thinking that are beneficial to their development portfolio.³⁶ Senior officers acting as mentors will insist on pulling their highest potential subordinates with them to jobs and assignments that may not be the best fit for the career path of the aspiring officer. In the end, mentors and, more broadly, officer management practices have drastic effects on where an officer gains experience and how well that experience associates them with strategic competencies.

A Flawed PME System

Just as officers rely on the officer management system to provide them with the best duty positions for development, they also rely on PME programs to prepare them for future challenges. According to Eliot Cohen, “These educational programs have been optimal for

shaping tacticians and well-rounded military officers, but delinquent in generating the deep thinkers [who] sustain the military profession in the long run.”³⁷ His apt assertion seemingly contradicts the two-pronged purpose of PME: train for certainty in order to master one’s skills, and educate for uncertainty in order to attain critical thinking skills that assist in unanticipated and unpredictable situations.³⁸ PME is paramount to an officer’s development, but its effectiveness rating over the past decade has been dismal. Only 62 percent of Army company and field-grade officers surveyed believe that the institutional domain has been effective in their development or helpful in improving their leadership capabilities.³⁹ Such low confidence relates to significant flaws enmeshed within a PME system that adversely affects the intellectual progress of our future strategic leaders.

First, the PME environment lacks the intellectual diversity needed to challenge

students who are being primed for strategic responsibility. Military organizations create an environment that inhibits divergence, which naturally extends into professional academic institutions. Conformity and similarity engross all officers consistently throughout their military career. Because of uniform standards, everyone dresses alike. Officers reside in nearly identical government quarters. Most military communities, often geographically isolated, lack cultural variety compared to civilian neighborhoods. With the implementation of values systems, everyone adheres to a shared set of beliefs. Assignments often reunite the same work colleagues because of redundant location options. Even though leaders will move potentially dozens of times in a career, the units they serve resemble one another in almost every way due to intentional standardization. With such resounding similarity in the information, alternatives, and payoffs presented in everyday life, officers begin

synchronizing behavior in all aspects of lifestyle, to include patterns of thought.⁴⁰

Having such a homogenous lifestyle and environment is not necessarily a bad thing for operational and family readiness, but it drastically undermines intellectual diversity in a PME setting. Like-minded students who come from the same professional background or defense establishment predominantly comprise seminars at PME schools. The current structure keeps officers intellectually isolated and unable to escape military paradigms or enhance their critical and creative thinking ability by interacting with people who truly think differently.⁴¹ Even though the schools attempt to diversify the seminars by integrating government civilians and military officers from different Services, the composition lacks the necessary peer ratios that would otherwise expose students to adequate whole-of-government perspectives.⁴² PME becomes a meeting place for generally like-minded individuals to reinforce comfortable biases and, therefore, serves as a mechanism for institutional group-think. Student intellectual diversity is negligible in a purely military education program compared to a university that consists of students from various backgrounds, values, political persuasions, and education and who have alternative experiences and viewpoints.⁴³

Educational expertise and tenures of PME military instructors also have a hand in perpetuating the gap of intellectual diversity among students. The selection process for instructors lacks sufficient discernment and relies mostly on the normal personnel management system rather than a process that identifies proper subject matter expertise for the position in mind.⁴⁴ Without the considerate and thorough selection of military instructors, unmotivated personnel viewing these positions as detrimental to promotion or even incapable personnel can make their way into the PME system, virtually eliminating the impetus for challenging student thinking. Conversely, high-quality military instructors who challenge their students to broaden their mental capacity have limited time as PME instructors because their Service requires

them to move in accordance with normal permanent change of station timespans.⁴⁵ Acquiring unqualified instructors coupled with frequent losses of qualified instructors presents a major challenge with faculty management and contributes to the lessening of intellectual diversity among PME students.

In addition to lacking intellectual diversity, PME courses lack depth and applicability in the curricula at each level. To be clear, the curricula at the PME schools generally have pertinent topics and concepts that enhance leaders' knowledge; however, a shortfall exists in how quickly evolving concepts get implemented into the program. For instance, "other than some adjustments to accommodate counterinsurgency doctrine, the PME provided by military institutions in the past decade has largely remained constant in spite of rapid changes and evolving threats in the world."⁴⁶ To exacerbate this problem, most of the students attending PME courses since 9/11 have wide-ranging deployment experience and real-world application of the topics covered. Course content is often inferior to the level of a student's practical experience and does little to prepare them for immediate follow-on assignments and future strategic assignments.⁴⁷ Likewise, the academic programs that officers experience in PME can be characterized as survey-level curriculum, which offers limited exposure to professional topics and prevents a level of mastery needed for proper development of lifetime practitioners.⁴⁸ Even if the depth of the courses and diversity of students met higher standards, the efficacy of PME schools, particularly for the Army, presents a different test.

Like all academic institutions, military PME programs must have legitimate oversight, certification, and accountability in order to maintain competitive efficacy of student education. As an example, the Army historically fails to measure up to its civilian academic counterparts by having less than a quarter of its PME programs accredited by authorized organizations under the U.S. Department of Education.⁴⁹ This inequity causes future strategic leaders to migrate through a

more recognizably substandard academic pipeline than their civilian counterparts destined for the same strategic field. As an extenuating effort, the Army created the Army University to better integrate all PME schools under one governing body, provide synchronization of progressive learning objectives throughout an officer's career, and establish regional accreditation standards for Army education programs.⁵⁰ Although a significant step forward, the Army University has yet to earn the regional accreditation it desires for many of its tenant programs, leaving them devoid of the comparable oversight measures seen at other universities.

The final evidence underscoring the inefficiency of the officer PME system, in relation to the Army, rests with underwhelming general officer continuing education. By definition, all ranks of flag officer fall under the category of strategic leader, making them the end product for the various leader development models. However, officers encounter a steep drop-off of PME once they pin on stars. As a simple measure, Army officers complete 32 combined months of mandated PME as tactical leaders in their first 20 years followed by roughly 8 combined months as strategic leaders in the next 10 to 20 years.⁵¹ There are even plans of dropping the 8-month requirement further to just 6 weeks in total due to course restructuring.⁵² Also, courses that general officers attend only familiarize them with practical strategic concepts rather than immerse them into analysis of the kinds of complex situations they could face.

The Army simply stops educating its officers effectively once they reach the strategic rank of general, when those officers need it the most. According to a previous Army War College report, "Other professions such as physicians, lawyers, and professional engineers have requirements for continuing education, but the Army has very little beyond orientation courses" for its most senior leaders like general officers.⁵³ General officers can count on their attendance at one of the senior Service colleges being their last extensive experience within a PME program littered with flaws.

A Way Ahead

Applying comprehensive modifications to the leader development systems of the Army and the other Services would increase the effectiveness of military officers throughout their careers and, more importantly, once they reach the highest levels of leadership. The most crucial recommendation is that current senior-ranking officials acknowledge that high-potential officers have been shortchanged by a flawed development system. Recognizing the problem would provide the right energy for integrated solutions to flourish. Structurally for the Army, Human Resources Command and Senior Leader Division should merge efforts with the Army University in a leadership Center of Excellence framework. Officer management and leader development are inextricably linked, and continuing to compartmentalize them defeats the objective of producing the best leaders. The remaining recommendations involve measures to help balance and improve the systematic portions of leader development over the course of an officer's career.

Successful completion of a broadening assignment and earning a master's degree should be required to compete for battalion-level command. Additionally, the Army and applicable Services should structure officer self-development to ensure not only that officers expend effort in this critical domain, but also that the focus is comprehensive and preparatory for gaining the right future skills. These adjustments would assist in the much-needed change in operational culture. Officer management adjustments should begin with restructuring evaluations to account for more intangible strategic skills such as how much prudent risk the officer takes, interpersonal skills they display, and examples of critical thinking and self-awareness improvement. At the same time, promotion boards should be directed to equally consider these strategic traits along with senior rater remarks about potential. The Army specifically needs to incorporate academic competency measures into the promotion and selection process. Integrating academic evaluation reports and graduate-level

grades more vigorously into the process or conducting pre-promotion board exams would serve as forcing functions for officers to break the operational chains and seek out academic opportunities instead.

PME requires major improvements to enhance the institutional development domain. For intermediate-level education and senior Service colleges, give the top quarter of students the option to participate in an apprenticeship program with civilian companies and government agencies outside of the military during the electives period of school. A program like this allows immediate practice and exposure of lessons learned under strategically demanding settings. Next, increase the length of service and number of civilian and high-potential professors at the intermediate and senior Service colleges so that student exposure to challenging and diverse thinking becomes paramount throughout his or her academic experience. Finally, Army and the joint Services should consider better continuing education for flag officers. The Army Strategic Education Program is a good first step in the Army's case, but the piloted program greatly curtails general officers' education. Expand the program to at least 6 months for flag officer rank, forcing them to inflate their knowledge of the environment to come. This approach would supersede the current education model and allow for more in-depth study in preparation for the demands they will soon face. Similarly, including mandatory fellowships for all newly promoted one-star flag officers would jump-start their mental transitions and could be the final gateway in breaking from deep-rooted tactical tendencies.

U.S. Army generals and senior military leaders do not reach the highest potential possible over the course of their career. Do not misunderstand; flag officers today reflect some of the most adaptive, dedicated, and experienced tactical leaders that our nation has ever produced. However, their development as strategic leaders is the product of a system wrought with flaws in military education, inefficient officer manage-

ment practices, and cultural barriers. Today's senior leaders have to be more dynamic than their predecessors from the past century, but the leader development system fails to prepare them for a strategic environment that has increased in complexity, ambiguity, and speed in just a few decades. As a result, the development system forces officers to focus on achieving the most senior rank versus the highest competency needed by the senior rank. Applying Stephen Covey's message in the epigraph, senior officers have as much desire to climb the ladder of success as ever before; however, the Army and the other Services have yet to reinforce the ladder they climb and ensure it is, in fact, leaning against the wall of strategic competence. The stakes are too high for the next generation of officers and the national security institution as a whole to not overcome these blatant gaps. JFQ

Notes

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Bashar al-Assad, August 2011 (Fabio Rodrigues Pozzebom/Agência Brasil)

Asadism and Legitimacy in Syria

By Nathaniel Kahler

Nathaniel Kahler wrote this essay while a student in the College of International Security Affairs at the National Defense University. It won the Strategy Article category of the 2017 Chairman of the Joint Chiefs of Staff Strategic Essay Competition.

On July 11, 2011, Secretary of State Hillary Clinton asserted that Syrian President Bashar al-Assad had lost his “legitimacy,” pre-empting a U.S. policy favoring regime change in Syria.¹ In August 2011, President Barack Obama stated that the

“future of Syria must be determined by its people, but [Asad] is standing in their way. For the sake of the Syrian people, the time has come for [Asad] to step aside.”² However, nearly 6 years later, Obama has left office, while Asad rules a contiguous stretch of population centers and the majority of Syrians left in Syria. Mainstream analysis explains Asad’s resilience as a result of external factors, namely Russian and Iranian support, lack of alignment of foreign aid to opposition forces, and a subdued U.S. response to Asad and prioritization of fighting the so-called Islamic State. Likewise, analysis on the internal factors focuses the narrow but loyal support the regime enjoys from the ruling Alawite sect.³ The illegitimacy of the regime is assumed.

Has the Syrian regime indeed lost its legitimacy? Scholarship on the concept of legitimacy has offered a variety of typologies for measuring a state’s domestic legitimacy—external legitimacy being an entirely separate concept. A survey of this scholarship reveals two general themes. First, *legitimacy*, or the right to rule, is in the eyes of the ruled.⁴ Second, the concept of legitimacy is fluid, and the factors that constitute legitimacy depend on the unique context of the state being assessed.⁵ While in Western democracies legitimacy is conferred at the ballot box and measured by a government’s ability to provide political goods like security or the rule of law, such legitimacy is a historic aberration.⁶ For most of history, a ruler’s heredity, religious credentials, or military strength have conferred legitimacy.

If legitimacy is the right to rule as perceived by those who are ruled, an assessment of Asad’s legitimacy must be informed by Syrian history and society. But who is a Syrian? Historically, Syria has no national identity; it is, rather, a society of overlapping and competing identities—those of tribe, class, region, ethnicity, and creed—each vying for the loyalty of the people.⁷ In 1945, the French Mandate ended, and the people living in a group of Levantine cities and their hinterlands sharing no national identity were proclaimed, by outside

powers, to be Syrians. The new country lurched from coup to coup until Hafez al-Asad, Bashar al-Asad's father, consolidated his rule over Syria in 1970.⁸ Hafez al-Asad offered a new identity and bargain through a secular ideology of pan-Arab socialism called Ba'athism. Today, the regime's bargain remains. In exchange for absolute loyalty, Asad provides an ideological veneer of solidarity and unification that is the *only* hope for security and stability in Syria.

This bargain could be termed *Asadism*, and it redefined the diverse people of Syria as part a broader shared national identity. Indeed, it is the only uniting identity that modern Syria has ever known. The resilience of this identity seems at first strange; the Alawite Asad rules over a state that is perhaps 60 percent Sunni Arab.⁹ However, the regime's bargain is predicated on understanding that Syria is a majority-minority country. That is, while Sunnis are a religious majority, this is not their only identity.¹⁰ They also belong to a minority: the urban elite, the military or Ba'ath party bureaucracy, a favored tribe, a regional identity—each identity adds complexity to the question of identity in Syria. In a land of minority identities, Asad's legitimacy is rooted in his ability to offer a veneer of cohesion that binds them together.

Moreover, Asad's legitimacy is not created or sustained in a vacuum. The inability of the opposition to offer a viable and broadly appealing identity in Syria confers legitimacy upon Asad. Asadism is the guarantee against the internal threat, *fitna*, which is societal discord and sedition. Political Islam and nonsecular ideologies have disastrously failed to present an alternative to Asadism. Likewise, alone in the Arab world, the Asad regime has maintained what can be termed a populist foreign policy by publicly rebuffing the machinations of Western imperialism and Zionism.¹¹ When the regime is charged with the Islamist label of *kefir*, or with the Western label of "illegitimate," it plays into the regime's narrative.¹² Both confer legitimacy on Asad.

Asadism and the legitimacy of the regime are at least as much a symptom of U.S. regional policy and of *takfiri Islam*

as antagonistic to them. This is not to blame the United States or Islamism for the perpetuation of Arab autocracies such as that of Asad. Rather, it is to recognize that the strong continuing appeal of Asadism is rooted in both a failure of political Islam to offer a viable ideology to a pluralistic society and a history of U.S. and broader Western imperialism, Central Intelligence Agency coups, support for military dictatorships, or disregard for Palestinians and "hypocrisy" that never matched U.S. rhetoric.

The myth of a stalwart and strong Asad regime (both father and son) that led Syria to stand against the forces of imperialism, Zionism, and Islamist *fitna* is, like so much of the regime narrative, a partial truth manufactured into an ethos of resistance that grows stronger as long as Asad faces down challenges. It may be that Secretary Clinton declared that Asad lost his legitimacy out of wishful thinking. Either Asad still has substantial legitimacy derived from factors unique to the Syrian context, or, alternatively, a new concept for the basis of Asad's resiliency is required. If legitimacy means that "the United States does not deem your government to be good, ethical, or in the U.S. interest," or some combination of these attributes, it ceases to be a useful concept. If Syrians have grown to understand that this is what is meant when a Western leader states "legitimacy," the concept itself has become illegitimate.

How, then, can the United States deal with a regime that is demonstrably "bad" but also maintains its legitimacy through a narrative that fits any U.S. move to counter it into a narrative of foreign conspiracy against the Syrian people? There is no clear path forward, but the United States must understand the Syrian conflict is not a 6-year war but rather an ongoing half-century conflict in which the United States has been a sometimes active, and sometimes unwitting, belligerent.

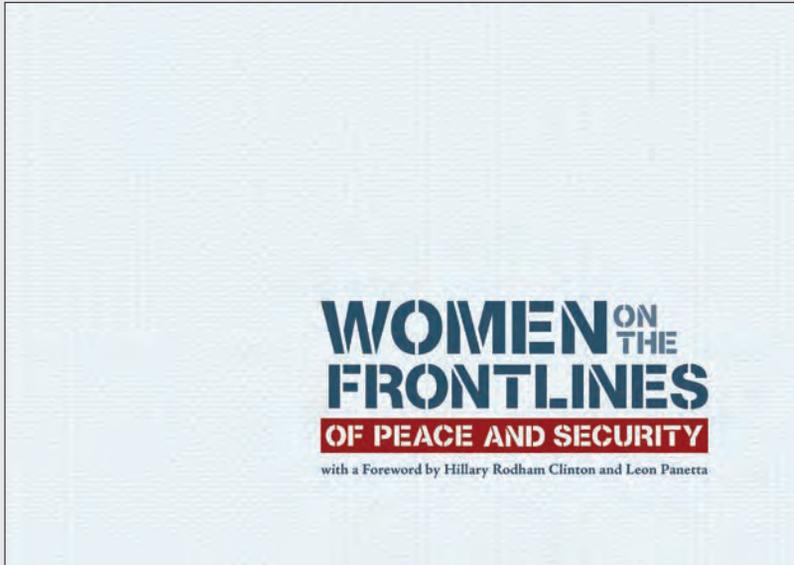
Justifications for U.S. intervention pursue two tracks of logic that are alternatively conflated and emphasized when convenient: ridding Syria of Asad is in U.S. strategic interest and/or a humanitarian imperative. Proponents of

U.S. intervention as a strategic interest argue that the United States and the rebels' various backers are, through their support for the opposition, changing the Asad camp's calculus. Intervention, it is argued, can encourage the regime to negotiate, somewhat preserving the international norms against Asad's brutal tactics, or weakening Iranian or Russian positions in the Middle East.¹³ However, the U.S. stake in Asad's departure will never be commensurate with the regime's interest in holding on; even if it were and the United States helped to force Asad from power, the installed government would be deemed illegitimate by virtue of having U.S. support.

Likewise, the United States may have a responsibility to protect Syrian civilians, and Asad has forfeited Syrian sovereignty by failing to protect his people from gross human rights abuses.¹⁴ However, a responsibility to protect divorced of legitimacy is a short-term effort to alleviate suffering that does little to build the long-term stability and security of the civilian population. Delaying regime victory can only further the suffering. If it is safe zones that the United States wants, there are plenty in Syria: in regime-controlled territory.

Even if the United States saw fit to invest the means to overpower the regime and its backers, this suggests no way to build governance in Asad's absence—a U.S.-installed government would be tasked with ruling without legitimacy in a splintered society. Modern Syria has not known stability except under Asad. It is impossible to know the extent to which the Syrian people view Asad as legitimate; accurate opinion polls do not exist, and elections are dubious measures. However, Syrian history and the continued resilience of the regime indicate that the United States may have prematurely discounted the sources of Asad's legitimacy.

This is not to overlook or undervalue the tragedy and suffering of Syria over the last 6 years. Rather, it is to argue that the U.S. policy of oscillating between strategic intervention to bring down a dictator, targeted actions against nonstate actors, and humanitarian intervention to prevent



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Foreword by Hillary Rodham Clinton and Leon Panetta

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further atrocities ignores the sources of regime legitimacy and prolongs the conflict. In short, the last 6 years have demonstrated that the battle over legitimacy in Syria matters, but this is not a battle the United States can win. JFQ

Notes

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Willie Fortes, right, and Briza Covarrubias, left, humiliate actress Cassandra Babcock who plays sexually assaulted victim during skit performed by Pure Praxis group aboard Camp H.M. Smith, Hawaii, November 4, 2015 (U.S. Marine Corps/Jonathan E. LopezCruet)

Toxic Culture

Enabling Incivility in the U.S. Military and What to Do About It

By Kenneth Williams

Core values are the heart and soul of U.S. military Services and their cultures. Military organizational, strategic, operational, and tactical strength lies in the degree to which the Services' systems, processes, and behaviors of personnel align with their stated core values, the collective

practice of which creates organizational culture. Yet even with the emphasis on core values such as respect and selfless service, the Department of Defense (DOD) continues to experience toxic and counterproductive behaviors that sabotage culture and values, as well as performance, productivity, force protection, health, readiness, and actions of personnel.¹ Although DOD has not conducted comprehensive research on toxic behavior, there is extensive private-sector research regarding the

impact, cost, tolerance, enabling, and reduction of toxicity. This article applies private-sector research to assess DOD policies and practices and to recommend courses of action. Although the implications and cost of toxicity are beyond the scope of this article, a brief discussion is relevant for demonstrating its significance. Private-sector research has identified relationships between toxic behaviors and adverse effects on mental and physical health (including suicide, stress-related illness, and post-

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traumatic stress), increasing demands on an already overburdened healthcare system; job satisfaction and commitment; individual and collective performance (cognition and collaboration); employee turnover; and the creation of an organizational culture that tolerates other inappropriate behaviors including sexual harassment and discrimination.² In addition to the impact on direct targets of toxicity, research has identified the transmission of adverse effects to bystanders and family members.³

Private-sector research has also associated toxicity with the monetary costs of medical care, legal representation, personnel replacement and training, lost man-hours due to leaders addressing toxic behavior, complaint investigations, absenteeism, decreased performance of targets and bystanders, avoidance of the toxic person, time spent job searching, and wasted resources.⁴ The monetary cost to DOD could be upward of \$4.7 billion, or 8 percent of the 2016 DOD budget,⁵ calculated by a model assessing the rate of private-sector personnel who experience toxicity (10 to 16 percent⁶) and a cost per case (\$23,000 to \$32,000, considering inflation⁷), and full-time civilian and military personnel strength (734,000 and 1.3 million respectively⁸). The purposes of this article are to discuss how toxicity and incivility are tolerated and enabled within DOD and to provide recommendations for addressing these effects.

Defining and Detecting Toxicity

Since the terms *toxic personnel*, *toxic leadership*, and *toxic workplace* are used loosely to describe a wide range of behaviors, it is important to define the construct. For the purposes of this article, *toxicity* refers to a pattern of combined, counterproductive behaviors encompassing not only harmful leadership but also abusive supervision, bullying, and workplace incivility, involving leaders, peers, and direct reports as offenders, incorporating six specific behaviors (see table): shaming, passive hostility, team sabotage, indifference, negativity, and exploitation.⁹ These elements indicate a clear but often covert pattern of abuse, disrespect, and control

of others, either aggressively or passively, in the name of high performance on the surface, but with the goal of self-advancement, resulting in the sabotage of interpersonal and organizational trust.

Toxic personnel are experts in managing upward, simultaneously giving the appearance of high performance to their supervisors while abusing others to get ahead.¹⁰ In other words, they kiss up and kick down. A common misconception is defining a toxic person as explosive and verbally abusive, when in fact most toxic behavior is passive and “under the radar.”¹¹ Therefore, detection involves observing the wake of wasted resources and demoralized workers left by toxic personnel. Signs of toxicity include a change in climate when the toxic person is present and consistently unproductive meetings as the toxic person sabotages the process to remain the center of attention and maintain his or her narcissistic self-validation. Robert Sutton suggests two tests for detecting toxic people: first, after interacting with the person, do you have a feeling of oppression or humiliation? And second, does the alleged toxic person focus his or her toxicity on “targets” who are less powerful?¹²

Because toxic personnel excel in presenting a positive appearance, effective detection requires leaders first to accept the reality of toxic personnel in their organizations, not assuming all is well; and second, to collect data from a variety of sources and levels of the organization—peers, direct reports, stakeholders, and customers.

How DOD Enables Toxicity

An organization experiences toxicity because its culture, policies, and systems create the conditions for tolerating and enabling uncivil behaviors. Like a garden, which requires nutrient-rich soil free from weeds, as well as water, light, air, and a caretaker to thrive, a high-performing organization requires such elements as trust, respect, effective communication, efficient processes and systems, and leaders who create the conditions for productivity. Typically, an organization identifies the problem only as the toxic individual, overlooking

the environmental factors in its culture, policies, and systems that are creating the conditions for the toxicity to flourish.¹³ This is like a gardener failing to prepare the soil in advance of planting by removing all rocks and unwanted vegetation, only later to pull weeds one by one. Within DOD, what are the rocks and weeds—the factors that create a toxic culture?

Leaders often take a strong stance against incivility yet respond to allegations of workplace toxicity with surprise, denial, excuses, and disbelief. Toxic personnel are frequently highly competent, dedicated to task accomplishment, possess skills or expertise needed by the organization, and at least appear to be productive in the short term. Leaders, assuming the organization is healthy, either disbelieve or are unaware that someone could be so malevolent toward others when he or she appears so dedicated.¹⁴ Most toxic personnel are experts in presenting an image of high performance to their superiors. While toxic personnel may be productive, they simultaneously create “a trust tax” that debits from results.¹⁵

A leader may be aware of but willing to tolerate toxic behaviors due to the personal or professional benefits resulting from the toxic person’s short-term factual or perceived productivity. *Toxic protectors* practice a subtle form of quid pro quo, either having a personal relationship with the toxic person, having a need for power and control that the toxic person’s actions feed, or benefiting from apparent high performance. Alternatively, the toxic person may exploit the relationship with the protector to advance a personal agenda. Sadly, “protectors do not protect an organization from the tragic human or bottom-line costs of toxicity. In fact, they prolong the situation by making it difficult for others who have the authority to take action.”¹⁶ Toxic protectors sabotage the organization by ignoring or enabling behaviors that degrade productivity, morale, trust, and cohesion.

Many times, an organization does not know how to deal with a toxic person and either reassigns or isolates and reallocates the toxic person’s responsibilities to other, already overworked personnel,

Table. Criteria, Description, and Examples of Toxic Behavior

Type of Behavior	Description	Observable Behaviors
Shaming	Humiliation, sarcasm, put-downs, jabs, blaming	Persistently pointing out mistakes intending to reduce another's self-worth Public embarrassment
Passive hostility	Passive-aggressive behavior redirecting one's anger inappropriately on a target person or persons	Resenting requests, deliberate procrastination, and intentional mistakes to avoid serving others Complaints of injustice and lack of appreciation Compliments that veil criticism Always getting in the last word (punch)
Team sabotage	Meddling to establish one's personal power base, resulting in decreased cohesion and performance	Inconsistency: unclear, constantly changing expectations and unpredictable policies, procedures, and behaviors Dysfunctional communication: in order to maintain power and control, withholding key information, sharing incomplete information, or sharing partial items of information resulting in each person having incomplete data
Indifference	An apparent lack of regard for the welfare of others, especially subordinates	Lack of compassion and empathy Excluding certain people Disinterested in the successes and unsympathetic to the suffering of others
Negativity	A corrosive interpersonal style that has a negative impact on individual and collective morale and motivation	Malice: cruelty and degradation are more prevalent than kindness Narcissism: uncaring abuse of others for personal gain
Exploitation	The perception of getting ahead at the expense of others	Inequality: tolerating toxic people, who are often highly skilled, but punishing others Favoritism: special treatment for a select few Nepotism: hiring unqualified friends or family Taking credit for other's results and accomplishments

Sources: Paul White, "5 Ways to Tell If Your Workplace Is Really Toxic," December 23, 2014, available at <www.entrepreneur.com/article/241132>; Bruna Martinuzzi, "7 Signs You're Working in a Toxic Office," August 16, 2013, available at <www.americanexpress.com/us/small-business/openforum/articles/7-signs-youre-working-in-a-toxic-office/>.

none of which actions address the behavior.¹⁷ Or, as is often the case, the toxic person is left in place and the targeted person is reassigned out of the toxic situation. As a result, the toxic person is not held accountable for counterproductive behavior, which is then passed around the organization. Another response is promoting the toxic person just to move him or her out, which justifies and reinforces the behavior. The failure to address toxic behavior creates resentment and frustration among other personnel.

In toxic organizations, the value of "getting results" becomes the priority, superseding core values. For example, performance metrics are useful in organizations characterized by trust and respect. However, in organizations characterized by toxicity and incivility, metrics become oppressive and prescriptive as personnel often adjust statistics to present the appearance of productivity and to avoid becoming targets of hostility.¹⁸

Organizational downsizing is associated with increased abusive supervision to maintain productivity, including manipulation, coercion, and threats.¹⁹ Leaders, amid downsizing, tend to be frustrated

by increased requirements and decreased resources and, being unable to express it to their supervisors, redirect their frustration toward direct reports.²⁰ In DOD, values such as duty, loyalty, and honor reinforce tolerating toxicity to fulfill mission accomplishment. Exhortations of "failure is not an option," "do more with less," and "I don't care how you do it, just get it done" tend to fuel toxic behaviors. In the era of DOD downsizing, delaying, and budget cuts, the merging of roles and expansion of span of control are common, with apparently little or no consideration given to streamlining processes and extending timelines. The combination of factors such as the pressure to produce, uncertainty, submissiveness, downsizing, abuse, and lack of peer support results in decreased motivation for individual and collective effort.²¹

In DOD, both military and civilian merit-based evaluation systems emphasize performance-based achievement. Although values are included in varying degrees on each department's military and civilian evaluations, the achievement of results determines the individual's rating, with little emphasis on values-based

behavior, treatment of others, and how results are obtained. According to information shared with the author by over 25 GS-15 and O-6 supervisors, this absence of values-based feedback may be due to supervisors being either unaware of how to include values in performance counseling and evaluations, or fearful of grievances.

Since evaluations provide primary information to board members, de-emphasizing values affects selections for promotion and key assignments. The ends of getting results and being promoted justify the toxic means. Also problematic is that in a zero-defects, highly competitive promotion system, any marginally negative entry could influence selection, resulting in values becoming an affirmative, literal "check the block" on evaluations. This reinforces toxic behavior, as toxic personnel are promoted and selected through the system and mistreat others along the way. Military lore is replete with examples of toxic senior leaders who were promoted through a results-driven system and thereby enabled to abuse others.²²



Chief selects run in formation during Applied Suicide Intervention Skills Training 5k run on flight deck of aircraft carrier USS *Theodore Roosevelt*, August 17, 2017 (U.S. Navy/Alex Perlman)

A results-driven culture in a downsizing organization that overemphasizes productivity and tolerates toxic behavior without accountability creates the conditions for toxicity, diminished readiness, and waste. Toxic people undermine productivity, organizations allow mediocrity, and targets of toxicity develop survival techniques, all of which drain energy and resources. Current private-sector research has identified several actions that DOD could implement or improve to address the problem of toxicity.

How to Detox and Create a Culture of Respect

Since a cultural status quo produced by the combination of multiple toxic factors is difficult to change, effective detox requires a systems approach, implementing and integrating multiple actions at each organizational level to reinforce respectful engagement.²³

Respectful engagement is “treating each individual with dignity and fairness, with the operational premise that you treat others in concert with the way you would like to be treated.”²⁴ It involves behavioral norms of authenticity, affirmation, attentive listening, transparency, open communication, trust, and mutual support. Also, successful change requires focusing on the enabling conditions and not narrowly on the toxic individual whose ingrained behavior is reinforced by a results-rewarding system that tolerates toxicity. How do leaders prepare the soil, remove the rocks and weeds, and nourish the plants of organizational culture? The answer is to feed and reinforce the culture, confront toxic personnel and those who protect them, and teach leaders to create a culture of respectful engagement.

Creating the conditions for productivity involves aligning and reinforcing

the organization’s core values, which provide the principles and standards for norms and practices.²⁵ Core values are the key nutrients for organizational culture and must permeate the organization’s daily activities—formal and informal discussions and meetings, decisionmaking, systems, processes, and performance.

The culture should create the expectation that all personnel practice the core values, not permitting anyone in authority to abuse the standards they are responsible for supporting. It is insufficient merely to create a list of values assuming the desired culture will automatically follow. Values must be communicated regularly and in a variety of ways, since, as research shows, “toxicity will be significantly reduced in organizations that clearly define values in concrete ways, identify the kinds of behaviors the organization will and will not tolerate, and have a clear set of

consequences when an individual does not live up to the values. Of course, the leader must model these behaviors as well.”²⁶ Enduring culture change requires leaders at each level to clarify acceptable and unacceptable behaviors by translating and operationalizing the department’s values for their specific organization, by enacting policies of universal accountability, and by reinforcement. Former Secretary of Defense Ashton Carter emphasized this clarification and his expectation that

*leaders at every level of the Department [should] engage personally with their subordinates in both formal and informal discussion about values-based decision-making . . . as a part of their official duties. These values include, among others, honesty, integrity, loyalty, accountability for actions and decisions, fairness and impartiality, respect, and responsible citizenship. Importantly, this engagement must begin with top leaders and cascade down to each subordinate organization’s leader. Leaders at all levels must foster a culture of ethics with their organizations by setting the example in their own conduct and by making values-based decision-making central to all aspects of the Department’s activities.*²⁷

Effective clarification involves regular, continuing dialogue on the meaning and practice of core values related to such items as communication (including email), collaboration, addressing failure, correcting mistakes, giving praise, acknowledging achievement, customer service, decisionmaking, ambiguity, goal setting, and respect for diversity. Leaders must ask, “What does respect (or honor, integrity, and so on) mean in how we communicate (or collaborate, correct mistakes, and so on) with each other?” Then, to determine the extent of clarification, leaders should have informal conversations with personnel throughout the organization and collect feedback from customer and stakeholders.

Performance feedback that includes details on not only what personnel have done but also how they get it done is extremely effective in reinforcing the organization’s core values.²⁸ One

suggestion is that evaluations consist of 60 percent competence and 40 percent values.²⁹ Since workplace relationships are a key factor in job satisfaction, retention, and performance, initial and subsequent performance counseling should establish a clear relationship between values-based behavior and its effect, either favorable or adverse, on team performance. In other words, personnel must hear how their behavior is consistent or inconsistent with organizational values and how they either empower or sabotage the organization.

Confront Toxic Personnel and Their Protectors

A gardener who observes weeds, pests, or disease must take immediate action so that the undesirable elements do not grow, multiply, and exploit the plants and their nutrients. In the same way, leaders must take immediate action using a variety of individual, collective, and organizational interventions.

A 360-degree assessment, whether mandatory or optional, is valuable for increasing self-awareness, developing personnel, and identifying toxic behavior.³⁰ Its effectiveness for influencing change could be increased by three actions: the rater or senior rater could select respondents to provide unbiased feedback; the feedback should be used in values-based performance counseling; and the feedback should be utilized in a coaching relationship for improved performance.³¹ Organizations can also use a 360-degree assessment to identify and address a toxic situation, not for the purpose of obtaining evidence for firing an individual, which can become a tool for retaliation, but for identifying counterproductive behavior and creating a healthy environment.

Most toxic people are unaware of their uncivil behavior and its effects and, when confronted, typically respond with denial or excuses.³² A change in behavior requires a specific performance improvement plan, also known as *targeted feedback*, focusing on toxic behaviors and effects on individual and collective performance.³³ Targeted feedback involves identifying the problem by respectfully and nonjudgmentally describing the toxic

behavior; implementing a sequential process to target a resolution by clarifying the behavior as a problem; allowing response and discussion; obtaining agreement about the problem, if possible, and brainstorming courses of action; and selecting a course of action with goals and a timeline for regular follow-up. While most people respond positively to feedback, toxic people are resistant, requiring a specific plan and persistent accountability.

Toxic protectors, although often unaware of their actions, protect the toxic person from being exposed and responsible.³⁴ Leaders at all levels should intervene with toxic protectors by first realizing they exist and are identifiable by the benefits gained from their relationship to a toxic person; second, by discussing with personnel their collective performance, work relationships, and climate assessments, carefully analyzing the information for toxic behaviors; third, by discussing with personnel toxic themes and patterns; and fourth, if a protector is identified, by confronting him or her using targeted feedback.

Provide Training in Respectful Engagement

The focus of professional military education and organization-sponsored professional development is primarily on developing technical skills and competencies. Leaders also need skills in creating an organizational culture that reinforces values, norms, and trust, and in confronting toxic behavior.³⁵ Values-based experiential methods that incorporate role-playing, active listening, conflict resolution, negotiation, dealing with difficult people, stress management, and discussion of dilemmas are effective methods of teaching respectful engagement, as contrasted with ineffective information-based instruction.³⁶ One-fourth of public-sector workers attributed their incivility to “not knowing any better” and to a lack of organizational training in respectful treatment.³⁷ An excellent example of values-based training is the U.S. Army 3rd Infantry Division’s sexual assault prevention program, “Bystander



Airman shares his experience being in toxic work environment at Storytellers event on Ramstein Air Base, Germany, February 23, 2017 (U.S. Air Force/Savannah L. Waters)

Intervention,” in which Soldiers engage scenarios to translate the Army core values into norms, develop ownership, and wrestle with values-based action. The program’s premise is that individual behavior to intervene is influenced by organizational culture of respect and trust, not extensive information.

Additional effective methods merit mentioning, including a clear process for redress that balances confidentiality and protections for the complainant and the alleged offender; professional leadership coaching; screening job applicants for values-based behaviors³⁸ and conducting exit interviews with departing personnel³⁹; and termination as a last resort after adequate opportunity for change.⁴⁰ The main effort of detox should be creating a culture of respectful engagement that prevents toxicity from flourishing.

A culture characterized by core values does not happen automatically and without significant reinforcement and vigilance. Since most toxic personnel are highly intelligent and skilled,

appear to be productive, and excel in managing upward, leaders should not simply assume the culture is healthy. Organizational toxicity is increasing in the civilian sector, and it seems that the Department of Defense is not immune to similar factors and forces that are causing this increase.⁴¹ If the military Services do not act, there will be continuing waste, declining productivity, an adverse effect on personnel, and decreased readiness. However, if the military implements the strategies for respectful engagement, leaders could expect increased readiness, productivity, performance, motivation, and a healthy environment. Future mission command will require high levels of trust among personnel due to an increased characterization of smaller and lighter units and the prevalence of cyber warfare.⁴² Since toxicity sabotages cohesion, trust, and performance, the success of future mission command depends on addressing the toxic elements in our military organizations. JFQ

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Soldier assigned to USNS Mercy hands out basic hygiene kits to local Timorese children at Dona Ana Lemos Escuela elementary school in Gleno during Pacific Partnership 2016 health outreach event, June 15, 2016 (U.S. Navy/William Cousins)

Increasing Partner-Nation Capacity Through Global Health Engagement

By Bertram C. Providence, Derek Licina, and Andrew Leiendecker

If you don't know where you're going, any road will take you there.

— PARAPHRASE FROM LEWIS CARROLL, *ALICE'S ADVENTURES IN WONDERLAND*

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Why the Department of Defense (DOD) and international military sector write large engage in global health is well documented.¹ How DOD conducts global health engagement (GHE) in a

systematic way is not. While pundits representing the Office of the Secretary of Defense, Joint Staff, combatant commands, Service components, and other organizations codify DOD policy for GHE, individuals and units implementing this broad guidance from 2013 to today continue to do so in a patchwork manner.² Using the Indo-Asia Pacific region as a case study, this article presents the background regarding the current state of GHE in the region, develops a standardized GHE approach for engagement, and informs a partner-nation 5-year strategy.

Background

GHE operations, activities, and actions (OAA) are used to implement the Secretary of Defense Policy Guidance for DOD GHE and the U.S. Army Medicine 2017 Campaign Plan in direct support of the U.S. Pacific Command (USPACOM) theater campaign plan (TCP) and U.S. Army Pacific (USARPAC) theater campaign support plan.³ Analysis conducted by the Uniformed Services University Center for Global Health Engagement found that of 2,518 Army engagements entered into the Overseas Humanitarian Assistance Shared Information System from fiscal years 2002–2012, 21.4 percent (approximately 540) were executed by USARPAC at a cost of \$96.4 million. Out of the 540 engagements across 24 countries in the region, 28 percent (approximately 153) were considered health related.

Despite significant investment, the lack of standardization in how GHE OAAs are executed results in fragmented programs that may not develop the health capability or increase the capacity of our partner nations (PNs) within the region. For example, the basic first responder (BFR) course has been conducted using various programs of instruction by different Services throughout the Indo-Asia Pacific region. The Air Force and Army National Guard also conducted BFR courses through the State Partnership Program using different programs of instruction. As a result, the lack of standardization in delivering the same course

leaves partner nations in the region confused. Both military and civilian partners are left to assemble the training pieces that vary by doctrine and application, which may generate reputational risk for DOD. Additionally, variation of the same course among our own Services makes it difficult to build interoperability with our partner nations. There may be a need for some variation in course content to account for conditions that may differ between regions. However, a standard from which each of the Services, to include the State Partnership Program, can adapt and deliver predictable training to a partner nation is essential.

Lacking a common approach also makes it difficult for DOD and partner nations to track progress toward achieving learning objectives over time. As such, DOD and partner nations become co-dependent to teach BFR year after year. Furthermore, thinking through the next building blocks of partner-nation medical capacity is often overlooked. This myopic approach of conducting BFR annually using various programs of instruction consumes resources that could be spent on developing the next higher level of capability such as Advanced Trauma Life Support in support of a United Nations–level one or two deployable hospital.

To mitigate the problem, USPACOM established a standardized BFR program of instruction. The resulting curriculum and associated training packages are now used by validated trainers from all Services to include Active, Reserve, and Guard forces. This is an important step in recognizing the variability in funding through the Security Cooperation Program (SCP) where the Army may secure funding to conduct an initial BFR course this year only to be followed by the Air Force to validate partner-nation trainers the next. Leveraging a standardized program also increases overall DOD efficiency. The lean approach of reducing waste where each Service developed independent BFR programs also incorporates elements of Six Sigma, where variation in training products was eliminated. Using a standard approach allows individuals and units conducting the BFR course to

objectively measure performance and effectiveness over time.

Despite this single example of success, no standardized program, process, or training packages exist for the other GHE OAAs conducted by DOD. These OAAs include the medical functional areas such as evacuation, logistics, and force health protection, among others, that make up a majority of the engagements. DOD policy now prescribes the requirement to “foster accurate and transparent reporting to key stakeholders on the outcomes and sustainability of security cooperation and track, understand, and improve returns on DOD security cooperation investments.” As SCP resources become more constrained, the ability to measure the impact of GHE using a standardized approach in support of partner-nation capacity-building is essential.

Developing a Standard Approach for GHE

In an effort to standardize health engagement execution and quantify measures of performance and effectiveness, the U.S. Army Regional Health Command–Pacific (RHC-P) built on the USPACOM Health Engagement Appendix of the TCP. The appendix uses three health lines of effort (HLOEs) to guide Service component GHE activities. The HLOEs are health system support, operational medicine, and public health/force health protection. Activities associated with the HLOEs include medical support to peacekeeping operations, basic first responder, humanitarian mine action, unique health needs of the female Servicemember, maternal/child health, and emerging infectious diseases, among others. The idea of binning health activities into HLOEs is constructive, and RHC-P refined these based on existing medical functional area doctrine.

A review of Army medical doctrine led to the development of 3 Army HLOEs based on 10 doctrinal medical functional areas (FA):⁴

- health system support
- health service support
- force health protection.

The 10 FAs are:

- combat and operational stress control
- combined information data
- casualty care
- dental services
- laboratory services
- medical evacuation
- medical intelligence
- medical logistics
- mission command
- preventive medicine and veterinary services.

Army Medicine is organized, trained, and equipped along these FAs. Employing an engagement strategy using doctrinal FAs increases efficiencies in capitalizing on existing military capabilities and standardizes the manner in which health engagements are conducted, assessed, monitored, and evaluated. Each of these HLOEs and their associated FAs are outlined below.

First, the Army health system support HLOE includes programs intended to build capability and increase capacity of PN military health systems to provide support across the range of military operations and types of mission support. Military operations include theater opening, early entry, expeditionary, detainee, humanitarian assistance/disaster relief, and peacekeeping operations. Mission support includes traditional assistance to a deployed force, operations predominantly characterized by stability tasks, and defense support of civil authorities. This HLOE includes the following FAs: mission command, medical intelligence, and combined information data. In addition, two USPACOM J07 (Command Surgeon) health engagement activities fall into this category: medical support to peacekeeping operations and medical support to humanitarian assistance/disaster relief.

Second, the health service support HLOE includes programs intended to increase capacity and capability of military and civilian health systems, as well as direct support to those systems. This HLOE assists the partner nations in maintaining a level of health care conducive to supporting the health of the

population, bolstering confidence in governance, and lowering the susceptibility to destabilizing influences. Any engagement with PN civilian health systems is coordinated with the ministries of health and U.S. Government agencies involved in health programs. These agencies include the U.S. Agency for International Development (USAID), Department of Health and Human Services (HHS) Office of Global Affairs, and Centers for Disease Control and Prevention (CDC). The health service support HLOE includes military-military and military-civilian engagement across the following FAs: casualty care (medical treatment, hospitalization, dental services, behavioral health, clinical laboratory services), medical evacuation, and medical logistics. In addition, seven USPACOM J07 health engagement activities are binned into this category: basic first responder, trauma combat casualty care, mental health, medical logistics, humanitarian mine action, unique health needs of the female Servicemember, and maternal/child health.

Third, the force health protection HLOE supports the health of U.S. military personnel, PN militaries, and general public by mitigating disease risks. This HLOE includes the following FAs: preventive medicine, veterinary services, combat and operational stress control, dental services, and laboratory services (area medical laboratory support). In addition, the USPACOM J07 health engagement activities of emerging infectious diseases and tropical medicine fall into this category for planning purposes.

Building 5-Year Health Engagement Strategies

Using doctrinal medical FAs to inform how the Army in the Pacific executes health engagements, RHC-P designed FA playbooks to socialize the concept with personnel instrumental in the SCP. The FA playbooks include the following six elements: doctrinal definition of the capability; list of units potentially available to support health engagements in the FA; international military education and training courses available for PN attendance through Department

of State appropriations; a doctrine, organization, training, materiel, leadership, personnel, and facilities scorecard to assess capability and track progress over time; an idealized engagement strategy to build the FA capability and increase capacity over a 5-year period; and an example concepts of operation to stimulate thought and discussion in designing an appropriate health engagement strategy. The FA playbooks were constructed to socialize with Service component and combatant command security cooperation country/regional desk officers; Embassy personnel such as the Office of Defense Cooperation, USAID, HHS (CDC Liaisons); and PN representatives from various ministries such as defense and health, among others.

During the annual combatant command security cooperation planning cycle, these FA playbooks would inform discussions with the aforementioned organizations and lead to the design of health engagement project proposals. This approach informs a 5-year health engagement strategy within the countries of interest that supports combatant command country security cooperation plans and Ambassadors' integrated country strategy. The strategy is then translated into a single slide depicting engagements along the three HLOEs, by FA, to achieve a strategic Service component and/or combatant command objective (see table). These strategies are used to inform senior leader discussions such as bilateral defense dialogues conducted by the combatant command and Service components. Focusing senior leader talking points and discussions on these strategies leads to bilaterally agreed to actions that sustain GHE programming to support TCP objectives.

The FA playbooks and associated 5-year strategies were socialized with great success during the 2016 USPACOM Security Cooperation Capability Development Working Group (CDWG) held in Honolulu. The CDWG is the single most important event in the Indo-Asia Pacific security cooperation planning process where engagement OAs are reviewed and coordinated in

Table. Country X Health Engagement Plan

Strategic Enablers, Tools, and Resources

Joint Chief of Staff Exercises, Pacific Angel, Pacific Pathways, Pacific Resilience Disaster Response Exercise Exchange, Global Health Security Agenda, National Guard SPP, Uniformed Services University of Health Sciences, Regional Forum, Asia Pacific Military Health Exchange, Armed Forces Research Institute of Medical Sciences, U.S. Agency for International Development, and so forth.

Line of Effort	2017 Engagement	2018 Engagement	2019 Engagement	2020 Engagement	2021 Engagement	2022 Objective
Health System Support (Shape)	P1: Medical Support to Peacekeeping Operations Medical Deployment Planning Subject Matter Expert Exchange (SMEE)	P2: Medical Support to Peacekeeping U.S. Medical Exercise Observation SMEE	P3: Medical Support to Peacekeeping Clinical/Functional SMEE	P4: Medical Support to Peacekeeping Medical Operations Table Top Exercise	P5: Medical Support to Peacekeeping U.S.–Partner Nation Medical Exercise	Primary <ul style="list-style-type: none"> Increase HA/DR and PKO Capability Secondary <ul style="list-style-type: none"> Enhance Defense Relationships Support Military Professionalism Increase Access and Interoperability Enhance U.S. Military Medical Readiness
Health Service Support (Posture)	P1: Clinical Laboratory Capability Development Workshop P1: Physical Therapy Capability Development Workshop	P2: Clinical Laboratory Handling Bio/Chem Sample SMEE P2: PT–Initial/Intermediate Patient Evaluation and Treatment SMEE	P3: Clinical Laboratory Infectious Borne Diseases SMEE P3: PT–Physical Fitness Enhancement and Injury Prevention SMEE	P4: Clinical Laboratory Disposal of Hazardous Waste SMEE P4: PT–Advance Clinical and Operational Practice SMEE	P5: Clinical Laboratory L2 deployable hospital lab operations SMEE P5: PT–Burn and Wound Care, Amputee Rehab SMEE	
Force Health Protection (Ready)	P1: Preventive Med Conducting OEHSA/All Hazards Approach SMEE	P2: Preventive Med Deployment OEHSA Phase I SMEE	P3: Preventive Med Occ/Env Sampling and Health Risk Assess SMEE	P4: Preventive Med Food/Water/Soil Vector Assessment SMEE	P5: Preventive Med TTX–Deployment OEHSA Phase II SMEE	
Strategic Leadership (Communicate)	<ul style="list-style-type: none"> Land Forces Talks Bilateral Defense Dialogues Senior Leader Engagement Asian Pacific Military Health Exchange Attendance at Association of Southeast Asian Nations Regional Forum for Humanitarian Assistance and Disaster Response 					

*See Medical Functional Area Playbooks for DOTMLPF Assessment Scorecard, Engagement Strategy, and draft CONOPs

advance of project nomination submissions. The playbooks and 5-year strategy tools were received with enthusiasm by myriad SCP officers. In numerous CDWG country synchronization sessions, these officers requested a single point of accountability by branch (for example, health) to synchronize the often redundant project nominations. The health community is positioned to support this request for two reasons:

1. The USPACOM Theater Campaign Order assigns a single Service component coordination responsibility for health engagements in designated countries.
2. The FA playbooks and associated 5-year strategies allow for all Services (to include Guard and Reserve) to focus their nominations on building capacity in support of a common TCP objective.

The USARPAC Assistant Chief of Staff for Medicine is using the responsibility assigned through the Theater Campaign Order, FA playbooks, and 5-year strategies with great success in synchronizing health engagement proposals among all Services, Guard, and Reserve. Furthermore, the playbooks and strategy tools were presented during the 2016 Association of Military Surgeons United States Annual Meeting and as part of the DOD Global Health Engagement Capabilities Based Assessment conducted from 2016–2017. Key leaders representing multiple Services, combatant commands, and Service components expressed interest in scaling up the use of these standardized tools immediately.

Although the playbooks and strategies are based on Army doctrine, all Services can incorporate their comparative advantage into the three HLOEs to ensure DOD does not duplicate efforts and gains efficiency and effectiveness in

executing GHE. Each combatant command can select the most appropriate FA and engagement strategy to meet its TCP objectives. Partners in the U.S. Central Command area of responsibility may seek casualty care support while those in the U.S. Southern Command and U.S. Pacific Command areas of responsibility seek laboratory and preventive medicine support. The laboratory and preventive medicine FA playbooks and strategies could help DOD and U.S. interagency partners in supporting partner nations through the Global Health Security agenda. The opportunities are great.

However, the FA playbooks are not perfect. The U.S. Army Medical Command recently tasked the U.S. Army Medical Department Center and School to develop training packages in line with each FA playbook. The Uniformed Services University Center for Global Health Engagement also expressed interest in potentially developing joint training



Hospital Corpsman performs cataract surgery on Fijian patient aboard hospital ship USNS *Mercy*, June 13, 2015, during Pacific Partnership 2015 (U.S. Air Force/Peter Reft)

packages based on the FA playbooks to further standardize how all DOD executes health engagement. Both initiatives will fill a gap and support quality improvement of health engagement executed by individuals and units, assessment of their impact, and lead to an increase in PN capability and capacity.

Through global health engagements based on standardized HLOEs and doc-

trinal FAs, the Department of Defense reassures allies and key regional partners of American commitment, prepares regional partners to assume multinational leadership roles, opens lines of communication with new partners, and sustains access to countries with limited capacity to contribute toward regional and international security. Furthermore, health engagements implement the Secretary of Defense Policy Guid-

ance for DOD GHE, Army Medicine 2017 Campaign Plan, USARPAC Theater Campaign Support Plan, and USPACOM TCP.⁵

Using this standardized approach to DOD GHE in a time of fiscal constraints is not only a wise investment of the limited resources available, but also increases the credibility of the DOD military healthcare system to leadership, elected officials, taxpayers, and the partners with whom we serve. JFQ

Notes

¹ Josh Michaud, Kellie Moss, and Jen Kates, *The U.S. Department of Defense and Global Health* (Menlo Park, CA: Kaiser Family Foundation, September 2012), available at <<https://kaiserfamilyfoundation.files.wordpress.com/2013/01/8358.pdf>>; Derek Licina, “The Military Sector’s Role in Global Health: Historical Context and Future Direction,” *Global Health Governance* 6, no. 1 (Fall 2012), 1–30, available at <<http://blogs.shu.edu/ghg/files/2012/12/VOLUME-VI-ISSUE-1-FALL-2012-The-Military-Sector’s-Role-in-Global-Health-Historical-Context-and-Future-Direction.pdf>>.

² Office of the Under Secretary of Defense for Policy, “Department of Defense Instruction TBD Global Health Engagement, 2016” (draft); Department of Defense (DOD) Instruction 5132.14, “Assessment, Monitoring, and Evaluation Policy for the Security Cooperation Enterprise,” January 31, 2017, available at <http://open.defense.gov/portals/23/Documents/foreignasst/DoDI_513214_on_AM&E.pdf>; Assistant Secretary of Defense for Special Operations/Low Intensity Conflict (ASD-SO/LIC), “Policy Guidance for Department of Defense Global Health Engagement,” 2013.

³ ASD-SO/LIC; *Army Medicine 2017 Campaign Plan* (Washington, DC: Headquarters Department of the Army, 2017), available at <http://armymedicine.mil/Documents/Army_Medicine_2017_Campaign_Plan.pdf>; U.S. Pacific Command (USPACOM), “Theater Campaign Plan 5000-20, Base Plan,” 2013; U.S. Army Pacific Command (USARPAC), “Theater Campaign Support Plan,” 2016 (draft).

⁴ Field Manual 4-02, *Army Health System* (Washington, DC: Headquarters Department of the Army, 2013).

⁵ ASD-SO/LIC; *Army Medicine 2017 Campaign Plan*; USPACOM; USARPAC.



Local boys observe activity within village of Sharmai, Paktika Province, Afghanistan, February 18, 2013, as Human Terrain Teams speak with locals (U.S. Army/Raymond Schaeffer)

Human Terrain at the Crossroads

By Brian R. Price

The task now falls to us to leverage [Human Terrain System's] lessons learned and make evolutionary progress toward the systematic inclusion of sociocultural information in all-source analysis to support peacetime engagement as well as combat operations.

—LIEUTENANT GENERAL MICHAEL T. FLYNN, USA

The U.S. Army's Human Terrain System (HTS) was created in 2007 amid fears of defeat in Iraq and Afghanistan. Responding to clear

needs expressed by military leadership, HTS was offered as an experimental effort to embed academic social scientists with Army and Marine Corps units to dramatically increase local sociocultural knowledge on the battlefield.¹

Following a test deployment in Khost, Afghanistan, in February 2007, and actively supported by General David

Petraeus, the program rapidly expanded to place personnel with 31 teams in both Iraq and Afghanistan, where groups from five to nine were embedded at the brigade, division, and theater levels. These teams were devised to provide cross-functional capability built around the expertise of one or two academic social scientists, a team leader (generally

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Human Terrain Team consisting of U.S. Army Soldiers and civilians, along with Afghan interpreter, meet with local citizens of village near Kandahar Air Field, Afghanistan (U.S. Army/Stephen Schester)

a military officer, Active duty or retired), several field data gatherers (research analysts), and one or two members to manage data and classification (research managers).

The program left Iraq in 2012 with the drawdown and was gradually reduced in Afghanistan starting in 2013 with sequestration and as brigades left theater. In September 2014, the program appeared to have met a quiet budgetary demise. It was hurried to its expiry on a wave of criticism from *USA Today*,² independent journalist John Stanton,³ and anthropologists opposed to the wars and to their discipline's participation in them.⁴ Some military officers, like Ben Connable and Gian Gentile, believed HTS to be starving the Army and Marine's ability to acculturate themselves.⁵ These critics, reporters, and their congressional allies coalesced into a vocal opposition

to leverage blogs and newspaper reports that put the program on the defensive almost from the beginning, complicating the nontrivial managerial and leadership challenges facing the program as it deployed without a test period into Iraq and Afghanistan. Sociologist Paul Joseph of Tufts University concluded that the HTS concept failed because it did not alter the war's strategy.⁶

The narrative advanced by HTS critics was that the program finally shut down because of its expense and manifold failures. Indeed, the program *was* expensive—costing as much as \$800 million over 7 years—and it suffered from significant growing pains characterized as “catastrophic success” in the words of HTS founders Montgomery McFate and Steve Fondacaro.⁷ Like other Federal employees in Iraq and Afghanistan, some members abused the freedoms in

the combat zone, where little oversight was practical in a program so quickly expanded. As with similar but more extreme cases by deployed members of the Department of Justice, some HTS members were accused of falsifying timesheets.⁸ Some alleged sexual harassment, and Army investigations did find some evidence for this. Team dynamics were often problematic and team leadership uneven.⁹ Mapping the Human Terrain Toolkit, the technology package intended to preserve HTS research and enable sociocultural mapping at the unit level, cannot be said to have been a success as it was cumbersome and failed to interface with major systems such as DCGS-A (Distributed Common Ground System—Army) or the cleverly named package used by the Marines, *Palantir*.

In the early days especially, HTS ability to recruit quality personnel was

hampered by dysfunctional contractor control, making the assembly of functional teams designed to work smoothly in the high-tempo world of a deployed combat brigade extremely difficult. The controversial conversion of HTS personnel from contractor to Department of Defense (DOD) civilian status in 2009 strained both the leadership and morale of HTS personnel, who often spent considerable time “outside the wire” to the breaking point. This created significant bad blood that fueled further criticisms and brought unwanted attention to HTS’s press-shy parent organization, the U.S. Army Training and Doctrine Command (TRADOC). Even as HTS secured better control over hiring and retention, many researchers fielded by HTS believed they were poorly treated, eroding the managerial and leadership climate.

Despite these criticisms, the need for and the assessments of the program by those making use of HTS products consistently returned positive results. In four separate studies based on interviews, commanders asserted that through HTS contributions kinetic activities were reduced and counterinsurgency initiatives were more creatively designed and effectively run.¹⁰ Engagements with key leaders and local constituents were reported to be stronger. Notably, HTS’s unique ability to deliver creative perspectives on local issues was a product of the embedding of civilian experts into a military environment. While these contributions are difficult to quantify (as is progress in counterinsurgency generally), the consistent support for the program by brigade commanders, despite its cost, suggests that HTS filled several important gaps.

This support goes a long way toward answering a question as to why the Army persisted in supporting the program into 2013 and 2014, despite negative press reports and turbulence of the early years. Commanders and successive secretaries of the Army and of Defense backed the program because field commanders deemed it effective.

Even before its shuttering, HTS management, in partnership with its new contractor, CGI Federal, attempted to find a new home. Early on, the potential

for Human Terrain Teams (HTTs) deployed in Phase Zero, in advance of kinetic or stability operations, was clearly recognized. Even as HTTs were removed from Iraq in 2012, a small team was deployed in support of U.S. Africa Command (USAFRICOM). Small cells supported other combatant commands, and a larger cell was proposed but never funded for U.S. Pacific Command. Other efforts were made, as a National Defense University (NDU) study recommended, to move the program to special operations forces (SOF), while advocates such as Lieutenant General Michael Flynn and Kerry Patton believed HTS capability should be consolidated with other intelligence assets. Some critics within the force, such as Ben Connable, believed HTS had competed with and retarded necessary growth in cultural competence, especially in civil affairs. Clifton Greene suggested HTS-type expertise become part of a renewed Civilian Expeditionary Force. Others suggested the Department of State would be a better fit.

Where should HTS-like capability be housed? Within DOD, within the Intelligence Community, at the Department of State, or with a contractor? To answer this question, it is necessary to identify the potential benefits, resources necessary to provide the capability, and potential costs. Rather than jettisoning nearly \$800 million in hard-won experience, finding a rational way forward to preserve what has worked is the purpose of this article.

Benefits

Sociocultural Analysis. HTS’s *raison d’être* was the mapping of the human terrain. In the non- or semi-permissive environments that characterized Iraq and Afghanistan, trained professionals could uniquely and quickly offer qualitative exploratory research to combat units. Reliable quantitative data were difficult to acquire (though it would be easier in a preconflict society). HTT analysis was built on a powerful research reachback capability, today preserved as the Global Cultural Knowledge Network at Fort Leavenworth, Kansas. The Phase Zero environment, more

extensive baseline assessments, and local connections could potentially be established and social science could be used with a greater degree of reliability, so long as political and cultural sensitivities were observed. If operations move to more kinetic phases, reliably trained and vetted social scientists could provide insight into the rapidly changing dislocation that accompanies conflict. As designed, HTTs were to work as cross-functional teams at the brigade level, providing both intelligence-gathering and analysis. In practice, many teams dispersed to support battalion, company, or even platoon operations as individual contributors, expanding the capability in an unforeseen way in direct support of combat units in the field. Therefore, the cross-functional team structure was not necessarily required to achieve remarkable results. Far less expensive individual contributors, surged as necessary, could provide much of the capability with much less cost.

Continuity. Between unit rotations, HTTs often provided a valuable store of local knowledge and experience. HTS’s own rotation policy was somewhat problematic with teams in a constant state of flux, but overall HTTs did provide a measure of continuity between unit rotations.

Alternative Perspectives and Bridging. As noted in a 2008 West Point study, “Commanders and staff appreciate the alternative perspective HTTs bring.”¹¹ It noted further that some HTT members earned trust “sufficient to take on the role of special advisor,” though this was not universal. Within the diverse world of “enablers,” HTT social scientists could bridge the academic/military divide, shaping input and contributions according to the unique command environment and requirements for each unit, leveraging their own diverse backgrounds. HTTs were not tied to the institutional bias and agendas for other contributors, nor were they completely bound by the reductive character of the military decisionmaking process. Their stance enabled considerable creativity and adaptability, countering institutional inertia and conflict. HTTs worked not only with brigade elements but also

with the State Department, Provincial Reconstruction Teams, and allied and host-nation officials, often helping to bridge the gap between civilian, nongovernmental organizations (NGOs), and military operations. Moreover, team continuity supported longer term viewpoints than the relatively short-term perspective of deployed military units.

Profiling Success

Commanders assessed their teams as successful if they brought understanding of the local environment, proved themselves by strong working relationships within the staff and with other enablers, and supported the brigade's efforts with their unique skills sets.

Despite considerable effort, HTS never established a comprehensive profile for what a successful "social scientist" looked like. Education and adaptability were known attributes, but alongside social scientists, those with a background in the humanities also excelled, so mission success was not necessarily limited by particular disciplines, such as anthropology. This had been suggested in the aforementioned 2008 West Point study, though it further complicated a troubled selection and assessment process. Clifton Green has argued recently that the HTS program turned itself around in 2012 and that it was a model program under the guidance and leadership of Colonel Sharon Hamilton. Until a more thorough organizational history is conducted, we may never know, but HTS did demonstrate the utility of embedding academics within combat units in theater and with combatant commands (USAFRICOM, U.S. Special Operations Command), as well as on a limited basis within special operations.

What is clear from the testimony of those who served with HTS is that *adaptability* and *flexibility* were key attributes. Also important was a comfort with military culture, key to not only bridging the local and military culture but also working with many other enabling agencies. As information gatherers, they needed the ability to interface smoothly with representatives of the host nation, and as analysts they needed the educational

depth to apply diverse methodologies to the complex issues that were sharply differentiated at least at the provincial level, if not the district or village.

Proposals

Sociocultural Information as an Intelligence Function. One stirring debate surrounding HTS concerned whether its function was intelligence or something else. HTS founders McFate and Fondacaro maintained that in order to be effective, HTS needed to forge ties within academia. They hoped that by focusing HTS products on unclassified material and widely disseminating them in an unclassified manner, such ties could be forged. In 2012, I argued for the gathering and collating of local and oral histories into an archive available to academics in a further effort to bridge the "academic/military divide," as both McFate and I have termed it. But HTS was also a kind of intelligence function, reporting to TRADOC G2 (Intelligence). In 2010, its new director, Colonel Hamilton, had been deputy G2 at TRADOC and moved the organization in a direction more in line with G2 parameters. Almost all material generated was caveated For Official Use Only, with much of it being classified SECRET. As such, it was not easily available to constituent civilian counterparts, local or partner officials, and it fed the opposition's favorite narrative of HTS as a supporter of lethal targeting, spying, and general nefariousness. Plus, it sharply reduced the availability of HTS products outside the defense community and virtually eliminated the possibility of collaboration with academia.

Members of the Intelligence Community have argued that such in-depth sociocultural intelligence should be formalized as an intelligence function. In 2010, Lieutenant General Flynn argued for stability operations information centers that would aggregate and disseminate much of the same kind of information gathered by HTTs. Furthermore, in his foreword to the 2013 NDU study on HTS, he suggested the "systematic" inclusion of sociocultural information into intelligence operations.

Along these lines, in *Sociocultural Intelligence: A New Discipline in Intelligence Studies*, Kerry Patton advanced an argument for and description of "SOCINT" in an attempt to articulate Flynn's vision. And indeed, such jobs have been advertised since at least 2012, generally administered as contractor-provided intelligence support. The positions as advertised require a *current* TOP SECRET/Sensitive Compartmented Information (TS/SCI) clearance and a much lower educational requirement, often just a bachelor's degree. Such requirements exclude experienced HTT personnel and reduce the pool of available expertise to a small number of already experienced intelligence officers who bring the same DOD/Intelligence Community perspective to their work. It specifically excludes academics owing to the current clearance requirement. These advertisements reflect the DOD and Intelligence Community's reflexive allergy to openness. The self-referential world of defense contractors, professional military education, and defense/intelligence sector enforces limited left-right limits on creative thinking. I argue that in the creative world of contingency/stability/hybrid/counterinsurgency operations, intellectual curiosity, creativity, and adaptability are prerequisites to success. A SOCINT analyst is not likely to provide the alternative thinking that HTS provided to commanders and staff. Their educational breadth is likely to be narrow, and their grasp on the relevant literature, social science, and humanities methodologies comparatively weak. And their products are likely to be classified, unavailable to the breadth of civilian, NGO, host-nation, and alliance partners who need the information.

These positions are analyst positions, not collectors; HTT combined collection ("gathering"), analytical, and collation functions, arguably yielding a more thorough approach that was more flexible to the needs of local conditions.

Finally, such formal adoption by the Intelligence Community is likely to feed continued negative press and hostility within academia, reducing the quality of recruits available to staff those functions,

just as Project Camelot and HTS evoked open and sustained hostility, bringing unwanted negative press to DOD. Critics David Price and Roberto Gonzáles, among others, accused HTS of neocolonial spying, just as sociologists accused the Special Operations Research Office of spying and subversion during the mid-1960s. In both cases the result was the same, and I have written elsewhere about the cycle of retrenchment that has repeated itself in the wake of a turbulent effort to engage the assistance of academia in the study and understanding of foreign populations.

If the Intelligence Community wants to develop an HTS-like capability, it will need to reduce the reliance on TS/SCI cleared personnel and instead find ways to integrate more highly educated and broadly oriented individuals who can contribute in a more fundamental way to the integration of sociocultural knowledge within the intelligence process.

House It Within U.S. Special Operations Command. In Afghanistan, one HTT served with SOF, where members often accompanied teams on missions while accessing reachback capabilities and connections with other HTTs. Special Forces in particular have long held a similar interest in sociocultural knowledge in their missions relating to foreign internal defense. Housing HTS permanently with SOF was the recommendation of the carefully wrought 2013 NDU study, *Human Terrain Teams: An Organizational Innovation for Sociocultural Knowledge in Irregular Warfare*.

The special operations community also employed Cultural Support Teams (CSTs) comprised of female Army personnel who were “attached” to the unit and who could serve for a year before returning to their units. CSTs went through a 6-week preparatory course before joining their special operations unit. This was similar to the Female Engagement Teams deployed alongside conventional Army and Marine units.

From at least 2012, HTS leadership explored the possibility of moving from TRADOC to United States Army Forces Command or SOF, but without success.



Soldier holds Afghan child and wears Kandahari hat to show solidarity during key leader meeting in Koshab Village near Kandahar Air Field, Afghanistan (U.S. Army/Stephen Schester)

Moving HTS into the special operations world make sense on several levels given the organization’s historical interest in local cultures and their relatively light footprint, less likely to trigger local immune responses. Without knowing why these efforts failed, it is impossible to comment on potential issues. But, as with the Intelligence Community, their products would likely be classified and compartmentalized, unavailable to broader DOD/State/Intelligence constituencies, and this does not help line

brigade or regimental commanders, their staffs, and teams in their efforts to understand the sociocultural environment. Moreover, the pool of available academic experts would likely be small, given the more rigorous physical and security requirements. Still, this would seem to remain a viable alternative.

Contractors: Sociocultural Consultants. Another approach is to house the capability within the orbiting contractor community. A number of ex-HTS personnel have advocated

this approach. Companies such as Civil Solutions International (CSI) are attempting to establish businesses providing sociocultural analysis services to defense and corporate markets. As an exemplar, CSI provides assessment/reconnaissance in Phase Zero operations, humanitarian assistance/disaster relief, and civil affairs, emphasizing “counterinsurgency by civil affairs,” seeking to drive change that it is hoped reduces the appeal of radical ideologies.

Contract services have advantages of being able to surge on demand and not directly involving DOD personnel, they may move more fluidly within local environments, and they might leverage knowledge gained in commercial contracts and establish credibility through positive civic and humanitarian action. But there are disadvantages, too—potential lack of accountability and control (issues that plagued contractors in both Iraq and Afghanistan), lack of connectivity within the military units, and potential lack of a cohesive approach built over time by the military units they serve.

Currently CGI Federal administers to the Global Cultural Knowledge Network. This is the remnant of the formal HTS program; CGI is charged with preserving the HTS product library and has additional training/educational capabilities. This solution has the advantage of maintaining some level of human terrain expertise, especially the reachback research centers, with the probable intent to expand at the combatant command level or surging in the event of greater demand. While it keeps the profile of the program low, it has not escaped the antipathy of its academic and congressional opponents. For this proposal to work, combatant commands would need to budget for HTT cores that could be surged as need required, as proposed (but not funded) by U.S. Pacific Command.

Establish Permanent Brigade-Level Presence of HTTs. Another possibility is developing a permanent capability within Army brigades or Marine regiments. In *The Humanity of Warfare: Social Science Capabilities and the Evolution of Armed Conflict*, Sam J. Striker argues for such a capability that serves corporate and

governmental demand, noting that in “peacetime” HTTs contribute to team training and advising. Striker maintains the structure as a team, concurring with the NDU study with respect to the team’s strength as a cross-functional entity.

Permanently embedding teams at the brigade level would build relationships therein and enable focused research on likely zones of deployment. It would also enable a slower and more considered selection of personnel and provide valuable preparatory training to the Brigade Combat Team/Regimental Combat Team, but it would also be likely to militarize the position. In this scenario, the HTT leader would likely become a staff position, integrating it into the reductive Military Decision Making Process. The expansive and “out of the box” role of the better HTT members would be lost.

Strengthening Civil Affairs: House HTTs Here? Here I propose a compromise: consider housing sociocultural research expertise within civil affairs or attaching it to Foreign Area Officers working out of Embassies (much of the early work on the program originated in the Foreign Military Studies Office at Fort Leavenworth). If established as a Reserve function, academics could serve as Reserve officers, much as other civic expertise is leveraged within civil affairs. Social scientists/area experts/humanities professionals could form the core around which a surge capability could be built in wartime, with more junior analysts being added as needed. The advantage would be that such officers could seek additional language and cultural training relevant to their potential areas of deployment, maintain and connect the program within academia, and conduct summer research designed to create a significantly greater Phase Zero awareness. Summers could be spent working out of an Embassy (if agreed and approved by the State Department). Such a solution would enable significantly better connectivity into academia, better acclimatize academics to the military environment, and enable surge capability in the case of deployment. In this arrangement, the social scientist could be the team leader,

eliminating overhead and fusing subject matter expertise with leadership. This newly conceived team lead could coordinate efforts of the Female Engagement Team. More extensive training could better prepare academics for service in the field, and relationships within the unit could be built before deployment.

On the downside, the potential as special advisor would be reduced, though most initiatives that have been proposed have the same problem. The ability to provide continuity as units rotate through a deployment would also be lost, though it could be argued that the entire civil affairs teams could be staggered with longer deployments.

State Department Function?

Arguably, the sociocultural function as described may overlap with similar functions within the Department of State. This was the historical problem with similar research conducted during the Cold War, as chronicled by Seymour Dietzman’s 1976 *The Best-Laid Schemes: A Tale of Social Research and Bureaucracy*. It is generally agreed that in counterinsurgency environments, close coordination or even fusion of diplomatic/civic and military efforts is necessary. In Iraq and Afghanistan, HTTs often worked closely with State Department personnel through Provincial Reconstruction Teams or as brigade enablers. In theory, it could be possible to house an HTS-like capability within State, reducing the academic angst associated with DOD or the Intelligence Community. Working out of Embassies, HTTs could establish themselves before conflict begins, perhaps with a representative housed with potential deployed brigades on a rotating basis to build military relationships. This could bring them into closer working relationships with the Foreign Area Officers and the long-term strategy, but careful management would be necessary to preserve their credibility with the brigade staff.

Conclusion

The Intelligence Community is already moving to capture some of the sociocultural analysis space, but this solution likely reduces sociocultural understand-

ing to a subordinate position within a community where “red layer” concerns are paramount. Housing an HTS-like capability with SOF has some merit but has not been realized for undisclosed reasons. HTS housed with the State Department would likely run into budgetary constraints since State’s budget for research is so much smaller than that afforded by DOD. The Army seems to have adopted a hibernation strategy, preserving a core of HTS capability, in theory in preparation to surge or support combatant command demands should they arise. This strategy does not, however, provide significant pre-conflict analysis.

But here is another possibility: hybridize the capability either by making it a part of the Army’s civil affairs organization or attaching small teams to work in Embassies, perhaps attached to Foreign Area Officers.

HTS did not, as sociologist Paul Joseph concluded—indeed, could not—provide the silver bullet that would fix a flawed counterinsurgency strategy. It is perhaps unfortunate that the program was unable to develop into a strategic asset, though it seems to have been productive at the tactical and, arguably, operational level. The Human Terrain System was never a “system,” but it did succeed in increasing local understanding and provided much-needed perspective to commanders, staffs, and Soldiers/Marines as well as other enablers.

While retrenchment into preparation for “regular” operations has, as after Vietnam, gripped DOD, the challenge of complex, hybrid, contingency, stability, or operations other than war remains, and HTS’s valuable experience should be preserved and integrated. The fruitful collaboration of academic, military, and diplomatic personnel is absolutely necessary as the United States continues to engage in operations around the globe. JFQ

Notes

¹ Montgomery McFate and Steve Fondacaro, “Building a Rocket in the Garage: Reflections on the Human Terrain System

During the First Four Years,” *PRISM* 2, no. 4 (2011), 63–82.

² Michael C. Davies, “Institutional Failure: *USA Today* and the Human Terrain System,” *Small Wars Journal*, March 28, 2016.

³ John Stanton published a wide range of critiques of the Human Terrain System (HTS) on political Web sites such as *Zero Anthropology*, *Cryptome*, *Intelligence Daily*, and *Pravda*. He continues to publish on the Global Cultural Knowledge Network.

⁴ A number of anthropologists organized themselves into the Network of Concerned Anthropologists (NCA), publishing a myriad of sharp critiques of the wars as neocolonial, characterizing HTS efforts as subversive intelligence aimed at domination and spying. The NCA’s long drumbeat of opposition began almost immediately as HTS was founded and continued even after the 2014 demise. They were frequently featured prominently by *USA Today* reporter Tom Vanden Brooke in his steady stream of critical reports. Many NCA articles appeared on the political blogs *CounterPunch* and *Zero Anthropology*. See David H. Price, *Weaponizing Anthropology: Social Science in Service of the Militarized State* (Petrolia, CA: CounterPunch, 2011); and Catherine Besteman et al., *The Counter-Counterinsurgency Manual: Or, Notes on Demilitarizing American Society* (Chicago: Prickly Paradigm Press, 2009).

⁵ Ben Connable, “All Our Eggs in a Broken Basket: How the Human Terrain System is Undermining Sustainable Military Cultural Competence,” *Military Review* (March–April 2009).

⁶ Paul Joseph, “Soft” *Counterinsurgency: Human Terrain Teams and U.S. Military Strategy in Iraq and Afghanistan* (New York: Palgrave MacMillan, 2014).

⁷ McFate and Fondacaro.

⁸ Office of the Inspector General, *An Investigation into Overtime Payments to FBI and other Department of Justice Employees Deployed to Iraq and Afghanistan* (Washington, DC: Department of Justice, December 2008).

⁹ For an in-depth analysis of the dynamics of the teams, see Christopher J. Lamb, James Douglas Orton, Michael C. Davies, and Theodore F. Pikulsky, *Human Terrain Teams: An Organizational Innovation for Sociocultural Knowledge in Irregular Warfare* (Washington, DC: Institute of World Politics, 2013). This is the most in-depth, complete analysis of the HTS program, though it is marred by its assumption that HTS research was best served through the cross-functional team structure. In practice, many teams divided their resources, sending individuals out to serve with battalions, companies, and even platoons. Such individual contributors often served the HTS mission more efficiently than the often-conflict-ridden teams could.

¹⁰ The four studies were conducted by 1) Cindy R. Jebb, Laurel J. Hummel, and Tania M. Chacho, “Human Terrain Team Trip Re-

port: A ‘Team of Teams,’” unpublished report prepared by the U.S. Military Academy’s Interdisciplinary Team in Iraq for U.S. Army Training and Doctrine Command G2 (Intelligence), 2008; 2) Yvette Clinton et al., *Congressionally Directed Assessment of the Human Terrain System* (Alexandria, VA: Center for Naval Analyses, November 2010); 3) *Contingency Capabilities: Analysis of Human Terrain Teams in Afghanistan—Draft Final Report* (Washington, DC: Institute for Defense Analyses, December 2011); and 4) Lamb et al.

¹¹ Jebb, Hummel, and Chacho, 4.



U.S. Coast Guard Academy officer candidate practices navigating using stars and sextant during evening training session aboard U.S. Coast Guard Barque *Eagle*, September 13, 2012 (U.S. Coast Guard/Lauren Jorgensen)

Are There Too Many General Officers for Today's Military?

By Gregory C. McCarthy

There are approximately 900 Active-duty general/flag officers (GO/FOs) today of 1.3 million troops. This is a ratio of 1 GO/FO for every 1,400 troops. During World War II, an admittedly different era, there were more than 2,000 GO/FOs for a little more than 12 million Active troops (1:6,000). This development represents “rank creep” that does not

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enhance mission success but clutters the chain of command, adds bureaucratic layers to decisions, and costs taxpayers additional money from funding higher paygrades to fill positions. As end-strength fluctuates, force structure and strength projections for the next decade show the uniformed Services maintaining substantial excess capacity at senior ranks. Although historical numbers are inexact guides and future threats could radically change circumstances, the case for reduction is strong. The Department of Defense (DOD) should reduce the numbers, billets, and

percent of GO/FOs in each Service to increase efficiency, streamline decisionmaking, achieve modest cost savings, and enhance accountability of decisionmaking.

Background

Historical comparisons of GO/FOs as a percentage of the total force from the establishment of the National Security Act of 1947 to today show an all-time high, a ratio that has steadily crept upward for more than half a century. GO/FOs grew so quickly during the Korean War that by mid-1952, the total

nearly doubled the World War II peak.¹ The Services as a whole had more three- and four-star generals for Vietnam than for a vastly larger force during World War II.² Although there were twice as many GO/FOs at the end of World War II than today, there were nearly 10 times as many Active-duty troops, and more four-stars serve today than served during World War II.³ One study states the obvious: the U.S. military is more top-heavy than it has ever been.⁴

Comparisons across vastly different eras can be problematic, and it could be unwise to mimic industrial age ratios. One study defends the dramatic growth in senior ranks as emerging from “the long-term decline of labor-intensive functions in the military relative to technologically skilled functions, and the increased demand for managerial skill, given the military’s greater organizational complexity over time.”⁵ Another raises the possibility of why the GO/FO population has grown while avoiding the downsizing that most of the forces have endured in the last few years, including joint requirements, coalition operations, organizational structure, and technological change.⁶ Some generals anonymously speak to the complexity of the modern battlefield as justification for more senior officials than before.⁷ One observer speaks of the dollars and not end-strength as the key growth in responsibility for today’s GO/FOs.⁸ Matching international or coalition partners in rank could also be a consideration.

But given official justification, or lack thereof, for the required number of GO/FOs, it is doubtful that systemized planning or corresponding requirements have informed the structure shaping present conditions. It is further unlikely that today’s senior leaders are of such a higher caliber that a higher ratio is justified. One prominent observer argues that today’s Army generals, as a representative example, have the same flaws as previous decades.⁹ Furthermore, the “strategic corporal” concept advanced several years ago plausibly posits that information technology will push strategic-level decisions further and further down to junior troops doing tactical-level jobs, thus obviating the need for many bosses.¹⁰ Drone pilots,

for example, are not all officers. In a streamlined modern battlespace, the need for multiple levels of brass is less urgent.

Concerns about top-heavy ranks are hardly new. Even in the era of comparatively austere command structure and within the least top-heavy Service, Marine legend Lieutenant General Chesty Puller stated of World War II, “The staffs are twice as large as they should be. The regimental staff is too large. I have five staff officers in the battalion and I could get along with less.”¹¹ Edward Luttwak states that in 1968 in Vietnam there were 110 GO/FOs and “hundreds and hundreds of colonels,” mostly in Saigon.¹² Evidence of excess brass adding to bureaucratic complexity or poor decisionmaking is indirect and suggestive. Anecdotal complaints abound and historical comparisons reflect skewed ratios, but a smoking gun is not apparent in the literature. Yet the overwhelming skew of the numbers suggests there is a great deal of excess brass that could be shed.

Recent Growth

One difficulty of assessing whether the GO/FO ratio is appropriate is that the Department of Defense (DOD) and Services offer little guidance or doctrine that explains the optimal number of GO/FOs. Defense authorization bill reports are replete with requirements, some requesting assessment of this topic, but rarely producing DOD-wide and vetted study. The Government Accountability Office thought DOD should articulate that validated requirements be periodically reevaluated. It found DOD wanting in both validating and updating requirements.¹³ DOD concluded in its 2003 General and Flag Officer Requirements that it needed more GO/FOs than authorized by law, and it usually resists efforts at congressional reduction. In 2011, then-Secretary of Defense Robert Gates ordered a widespread reduction in 2011 as part of larger reforms. In 2014, DOD admitted it had not updated GO/FO requirements since 2003 when it last sought an increase.¹⁴ One difficulty in understanding the optimal number is that Services have their own GO/FO requirements

and a joint pool, but the overall picture is not presented.

The Services have slight variations in GO/FO and officer/enlisted percentages. The Air Force has the highest percentage of officers and GO/FOs, and are 2.5 times as top-heavy as the Marine Corps.¹⁵ The Air Force and Navy shrank in the last decade but did not decrease their percentage of GO/FOs. The Navy has nearly as many admirals as ships when ships are now far more capable (seemingly arguing for fewer admirals). Identified Service needs and tradition, as well as an apparently informal truce between Services not to criticize each other’s funds or priorities, explain this arrangement. An across-the-board assessment is in order.

The Marine Corps, which has the lowest percentage of officers among the Services, is not exempt from these concerns. There has been a 38 percent increase in commissioned Marine officers as a percentage of end-strength from 1968 to 2015 with no obvious justification.¹⁶ Overall, all Service officers as a percentage of the total force have grown an identical percentage over that period.¹⁷ Evaluating the farm team for the next crop of generals, one commentator has lamented the state of Marine colonels: “The majority of these O-6s add little value to the process and are seen by many as unimaginative paper pushers who inhibit rather than assist Headquarters’ ability to accomplish its mission of organizing training and equipping the force. They have become an obstacle.”¹⁸

Events and time have not fundamentally altered the steady upward growth of GO/FOs. Although various defenders of the high level of GO/FOs cite the joint requirements of the Goldwater-Nichols Department of Defense Reorganization Act of 1986, GO/FO numbers reflect a steady upward trend from World War II to present with no spike after 1986, just a continued trajectory. Neither has the introduction of nuclear weapons appeared to have had an effect. Furthermore, Goldwater-Nichols took effect in the final years of the Cold War and subsequent military downsizing, a theoretical opportunity for brass reduction along with the



Airman welcomes new officer trainee to Officer Training School, November 2013, at Maxwell Air Force Base, Alabama (U.S. Air Force/William Blankenship)

significant force reduction that took place. The reverse has occurred. Senator John McCain (R-AZ), chairman of the Senate Armed Services Committee (SASC), defended a proposal to reduce GO/FOs and recently summarized the Goldwater-Nichols trends: “Over the past 30 years, the end strength of the joint force has decreased 38%, but the ratio of four-star officers to the overall force has increased by 65%.”¹⁹ Against the argument that budget authority responsibility drives today’s GO/FO numbers, the 1986 defense topline is larger than today’s amount.²⁰

A possible explanation for the continued increase in GO/FOs is the requirements associated with the war on terror. This period has shown a continuation of the trend line. From 2001 to 2011, the number of three- and four-star officers grew by nearly 25 percent, one- and two-stars grew 10 percent, and enlisted ranks only 2.5 percent.²¹ Adding 2 more years to the sample shows an even steeper disparity. One study found, “From FY [fiscal year] 2001 through FY 2013 . . . the GO/FO and non-GO/FO officer populations

grew from 871 to 943 (8 percent) and from 216,140 to 237,586 (10 percent), respectively, while the enlisted population decreased from 1,155,344 to 1,131,281 (2 percent).”²² Especially noteworthy is growth at higher ranks.

An area of growth was combatant command headquarters, which grew by about 50 percent from FY 2001 through 2012. Despite some congressional concern about brass creep, DOD has grown (through congressional authorization and appropriations), adding new commands and organizations, including the National Guard Bureau (2008), U.S. Africa Command (2007), U.S. Cyber Command (2010), Sexual Assault Prevention and Response Office (2006), and Defense Health Agency (2013), all headed by GO/FOs or higher ranking GO/FOs over those already in place.²³ Do any of these reflect a strategic necessity?

U.S. Space Command and U.S. Joint Forces Command were closed during this period, but were not enough to offset the growth trend. One reporter estimates 21 generals running the current

light-footprint war against the so-called Islamic State.²⁴ While not part of peacetime DOD, even the Coast Guard has gotten in on the act, adding a second four-star to its permanent ranks.²⁵

Right-Sizing

A defense of the requirement for a large number of GO/FOs is found in the ostensible need to provide “inherently governmental” functions, that is, decisions involving high levels of government assets or personnel. But this need does not explain the multiple levels of GO/FOs that are involved in any substantive decision, or that many GO/FOs command no forces whatsoever. One GO/FO in a decision process might be justified, but it is almost always many more. Additionally, recent growth has coincided with a boom in outsourcing, meaning GO/FO growth could not have occurred with inherently governmental functions in mind.

Clearly, historical comparisons or even lamenting the upward trend do not end the issue. The deeper question is

what the right percentage of GO/FOs, Service-specific or DOD-wide, is. DOD took a half-hearted stab at the matter in 2003, successfully requesting more. Since then, it has not updated or addressed its requirements, although Secretary Gates's ordered reductions assumed excess. The Services cannot be expected to lead, as voluntarily sacrificing personnel is a zero-sum game and would be professional suicide for a Service chief to unilaterally disarm. Yet if there is no optimal percentage, the current ratio is indefensible.

Both DOD and the Services have been absent in defining their GO/FO requirements, occasionally asking for additional ad hoc slots, rarely requesting fewer. No DOD entity has offered much in the way of principles, let alone numbers, other than marginal alterations of the previous year. The Army recently got its Pacific billet upgraded to four stars. The Marine Corps, for example, successfully requested 12 more generals in the FY 1997 defense authorization bill over the vociferous objections of only one Senator. The Marine Corps conceded that only 4 of the 12 had anything to do with joint requirements.²⁶ Even in today's era of constraints, Marines received one additional net GO above the two-star level in the FY 2017 defense authorization.²⁷

The result of brass creep is "making routine authorizations complex procedures," in one view.²⁸ This frustration led Secretary Gates to order the elimination of more than 100 GO/FOs as part of his 2010 efficiency initiative. He then stated, "Almost a decade ago, Secretary Rumsfeld lamented that there were 17 levels of staff between him and a line officer. The Defense Business Board recently estimated that in some cases the gap between me and an action officer may be as high as 30 layers."²⁹ Gates's plans were partially implemented, but the highest ranks were spared. One former principal offered that, "when Gates spoke there were 981 generals and admirals. Today, there are 958. Yet, this difference results almost entirely from reducing one-stars; there are now 10 more three-stars, and 14 more two-stars."³⁰

Congress has traditionally questioned DOD's request for more GO/FOs. One senior DOD official stated 20 years ago, "Congress has consistently taken the view that we have needed fewer general and flag officers, and that we have taken the opposite view, that we needed more than the Congress would allow."³¹ Congress has generally taken the opposite position of DOD on Base Realignment and Closure (BRAC), weapons systems, commissary/TRICARE reforms, and other spending items whose reduction would yield far more savings.

The Senate has recently used its confirmation power to block the promotions or higher grade retirements of certain controversial officers. The Senate could use confirmation to decline promotions as a way of reducing GO/FOs, although this is virtually unprecedented. Senator John Stennis (D-MS) of the SASC personally imposed a cap on Air Force generals, announcing in the mid-1950s that he would confirm no more than 300. During Vietnam, 560 Army GOs were permitted by law, but only 487 by Stennis.³² So a determined Senator backed by a majority, without formal House or Presidential input, could potentially block the filling of GO/FO vacancies if he or she desired. Similarly, DOD could choose not to fill vacant billets through natural attrition.

As the senior uniformed leaders of the military, the higher percentage of GO/FOs could perhaps be justified by unambiguous strategic success. Thomas Ricks views the GO/FO job description as "being able to impose one's will on a large organization engaged in one of the most stressful of human activities."³³ But since World War II, American military successes mostly stop at the tactical or operational level. Today is characterized by less than obvious success. Ricks finds the post-World War II class of generals, with few exceptions, strategically inept, seen in middling conclusions to the many conflicts of the last several decades. He argues that Army leaders of the 1980s and early 1990s "produced a generation of tacticians who knew how to fight battles, but who apparently lacked the strategic ability to fight and conclude

wars."³⁴ A retired Army three-star places losses in Iraq and Afghanistan on abysmal generalship, stating "[it was] our war to lose and we did."³⁵ This damning indictment need not be wholly embraced to believe the system would be streamlined and improved with fewer GO/FOs. Strategic-level thinking seems to be missing, and a reordering of GO/FO-specific professional military education seems to be in order.

More troubling is the perception of increased corruption among senior officers. Perhaps this is only increased *reporting*, but high-visibility scandals have tainted the Navy, of note, as well as prominent GO/FOs in other Services, often with salacious details and tales of misuse of government resources. These revelations seem to happen with a frequency unheard of as recently as two decades ago.³⁶ This may be a "good news" story of policing the ranks as never before, but the disclosures raise doubts about the crop of current leaders. Enhanced accountability would be more achievable with a smaller subset. Would national security be gravely damaged with a couple dozen fewer GO/FOs? The heightened reporting of scandals involving GO/FOs exposes an inadequate status quo. The population could be reduced.

According to Ricks, the Army's current "template of generalship," which he argues is representative and influential over all Services, is that of "organization men who were far less inclined to judge the performance of their peers. They were acting less like stewards of their profession, answerable to the public, and more like keepers of a closed guild, answerable mainly to each other."³⁷ This situation cries out for reform and oversight from without, as DOD has proved unable to correct itself.

The FY 2017 Defense Authorization Act has admirably tackled this topic, ordering a reduction of 110 GO/FO positions by the end of 2022. It also lamented the following:

despite two decades of Congressional concern the Department of Defense and the military departments have not demonstrated the willingness to implement



Marine candidate participates in fire team assault course at Officer Candidate School, Marine Corps Base Quantico, Virginia, June 17, 2017 (U.S. Marine Corps/Cristian L. Ricardo)

*even the reduction in the number of general and flag officer positions directed by the Secretary of Defense's Track Four Efficiencies Initiatives decision of March 14, 2011.*³⁸

This is a good start.

Congress contemplated an additional 10 percent reduction in GO/FOs in the report accompanying the FY 2017 law. Service- and DOD-wide sacrifice is in order and the effects of such a move should be monitored with hopes of something approaching the 25 percent reduction that the Senate originally passed. Reduction should be imposed on headquarters, bureaus, offices, and commands. Service vice chiefs and other high-level deputies could be reduced to three-stars as they were decades ago before Goldwater-Nichols. Theater commanders below combatant commanders could be three-star positions as they have been in recent memory. Excess senior Pentagon civilians, positions largely

vacant as of this writing, should also be targeted, but that topic is beyond the scope of this article.

Conclusion

One estimate places the total salary cost to each general, including aides and staff, at nearly \$1 million annually.³⁹ If all GO/FOs and their retinue were eliminated, savings would be less than \$1 billion annually. Unlike BRAC or cancellation of a weapons system, even a significant reduction in the number of GO/FOs would amount to relatively small savings in an overall DOD budget of approximately \$580 billion in FY 2016. However, it would set the example and begin to address personnel costs, one of the drivers of unsustainable trends in DOD and broader budgeting.

Despite the Trump administration's expressed desire to increase defense spending and end-strength, this will likely prove difficult. Close observers point out that its recent proposed increase of \$54

billion will barely keep pace with inflation and not result in greater overall numbers immediately.⁴⁰ The pressure is not off for continued reform. The present setting calls for more efficiencies rather than fewer. Continuing to reduce top-level officers is the kind of cost savings that must be sought. Personnel costs have to be addressed and should begin at the top. Ideally, this should trigger a DOD-wide scrutiny of personnel needs vis-à-vis corresponding missions and long-term threats.

The sequester effort of the Budget Control Act of 2011 was criticized in numerous corners as an indiscriminate instrument that blindly cut domestic and defense spending equally. But it had the virtue of partially controlling spending in an era of runaway deficits. Today's times are no less challenging. Getting a grip on GO/FO numbers and, ultimately, senior civilians and total force requirements would begin to align means and ends. Reducing each year by a percent and thus leading by example is how it should

begin. The Defense Department and national security of the United States would be enhanced by reducing the number of GO/FOs currently on Active duty, as part of a larger rationalizing of command structure and making forces leaner and flatter. This is not inherently risky in today's world of technology and communication. Our GO/FOs could lead in fewer numbers.

All personnel numbers, from end-strength to GO/FO ratios, should be regularly scrutinized to evaluate the effects on national security. The steady upward growth of GO/FOs has no apparent justification. The case for reduction involves inductive reasoning as the Services appear reluctant to state what inherently governmental tasks or organizations require GO/FO presence. The Services' less-than-full-throated defense of their GO/FO numbers indicates that the levels have no inherent justification and could be reduced. The fact that none of the Services rebutted Secretary Gates's demand for fewer GO/FOs speaks to a weak case for the status quo. The Services have thus resorted to incremental bargaining in attempting to maintain their numbers, offering minor concessions at the lower ranks of GO/FOs. Today's technology allows for a much clearer battlespace picture than at any time in history, allowing for a flatter chain of command, obviating the need for multiple GO/FO inputs. Staff and headquarters elements are the least defensible places for layers of brass. The burden of proof should be on the Services to justify GO/FOs outside of senior leadership and commanders of large line organizations. Services must be required to identify not which GO/FOs they want to give up but which ones they want to keep. JFQ

Notes

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¹⁶ Author's review of end-strength numbers.

¹⁷ Congressional Research Service Report compilation of data provided by Defense Manpower Data Center.

¹⁸ Pete Gaynor, "Where Have All the Colonels Gone?" *Marine Corps Gazette*, March 2005, 44.

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Airman with 731st Airlift Squadron pilots C-130 Hercules as part of U.S. Army Africa Exercise Central Accord 2016, in Libreville, Gabon (DOD/ Brian Kimball)

Exploring a New System of Command and Control

The Case for U.S. Africa Command

By Michael G. Kamas, David W. Pope, and Ryan N. Propst

The Senate Armed Services Committee (SASC) proposed several changes to improve the organization of the combatant commands (CCMDs) in its markup of the National Defense Authorization Act (NDAA) for Fiscal Year 2017. The first provision seeks to focus the CCMDs on their

primary warfighting mission supporting the National Defense Strategy, limiting CCMD participation in other important, but nonessential, mission sets. A second proposal would “require the Secretary of Defense to conduct a pilot program on an alternative organizational structure at one combatant command

... replacing the Service component commands with joint task forces [JTFs] focused on operational military missions. The Committee believes that this could provide lessons for improving the integration of operational efforts across the command, streamlining unnecessary layers of management, and reducing the number of staff.”¹ Converting the command and control (C2) structure of a geographic CCMD from a group of Service component commands to a set of JTFs is achievable, despite congressionally mandated reductions in headquarter-

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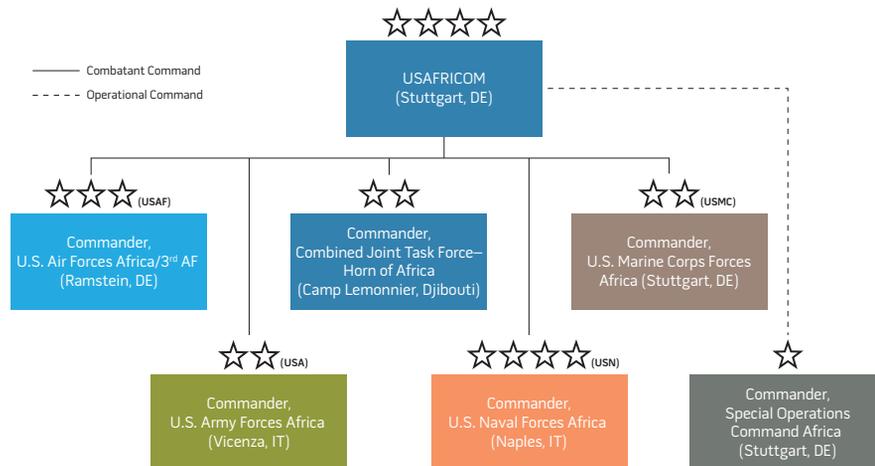
ters staff personnel and lack of a major combat operation in theater. While the final version of the NDAA removed this requirement, U.S. Africa Command (USAFRICOM) would have been the ideal CCMD to test and evaluate this new C2 structure.

The Goldwater-Nichols Department of Defense Reorganization Act of 1986 provided the impetus for several organizational changes that are still evident today. While many associate Goldwater-Nichols with the mandate to end parochialism within the individual Services through new emphasis on “jointness,” the legislation also provided greater command authority for the unified and specified combatant commands. Geographic combatant commanders now report directly to the Secretary of Defense instead of falling under the Chairman of the Joint Chiefs of Staff. The Service chiefs would provide training, manpower, and equipment for the joint force, allocated and apportioned under the operational control of a combatant commander. As Secretary of Defense Chuck Hagel stated in a 2013 speech, “Goldwater-Nichols succeeded in its purpose by strengthening the Joint Staff and the Combatant Commands, but it went about doing this by layering joint organizations and processes atop service organizations and atop processes. The elevation of the former did not automatically lead to the diminution of the latter.”²²

Proponents of Goldwater-Nichols reform argue that changes to warfare in a complex world require a different approach to military command and control. Secretary of Defense Ashton Carter stated, “Updates are needed in the Combatant Commands, adapting them to new functions, including cyber, and continuing to aggressively streamline headquarters.”²³ In an era where warfare has shifted from conventional nation-against-nation conflict to a more unpredictable set of interrelated conflicts between state and nonstate actors, perhaps geographic boundaries are no longer the most effective way to organize the C2 structure of military operations.

In August 2016, the Joint Staff J7 Deployable Training Division published the second edition of a focus

Figure 1. U.S. Africa Command Current C2 Organization



paper titled “Geographic Combatant Commander (GCC) Command and Control Organizational Options,” which analyzes several C2 alternatives available to the unified combatant commanders during steady-state or crisis operations. Traditionally, a CCMD consists of subordinate commands that could be grouped into three categories: Service components, subunified commands, and functional components. There is not a standard template on how each CCMD must organize, but the C2 structure broadly utilizes a set of Service component subordinate commands and an additional special operations component to execute the CCMD’s mission. The J7 paper also analyzes three additional options for a CCMD’s C2 structure: a single Service force, JTFs, and specific operational forces.⁴

The JTF option is not without precedent as it has been successfully executed in the years following the passage of Goldwater-Nichols legislation. Operation *Just Cause* in 1989 was the first success story of a JTF operating under the authority of U.S. Southern Command in Panama. Today, the Combined Joint Task Force–Horn of Africa (CJTF-HOA) is an example of a combined joint task force (CJTF) subordinate to USAFRICOM, which has been charged with oversight and execution of counterterrorism missions in Somalia and the broader East Africa region. The J7 paper provides significant guidance on when the employment of a JTF or

CJTF option could prove advantageous. These reasons include a “single mission focus and resultant close integration/C2 of forces and the freedom for the GCC to maintain a wide focus of the CCMD area of responsibility (AOR) through deliberate delegation of authority to the JTF commander.”⁵ Although JTFs were designed to be limited in duration, that paradigm has shifted in recent years as demonstrated by enduring JTFs such as CJTF-HOA and JTF-Guantanamo.

Since the proposed 2017 NDAA from the SASC would require one of the geographic combatant commands to evaluate the alternative JTF option, the existence of CJTF-HOA and the broad mission set of USAFRICOM make it the ideal place to test this C2 structure. Although USAFRICOM covers a large continent and is engaged in over 15 named operations, it is an economy of force command with limited assigned forces that relies on force allocation and force sharing agreements with U.S. European Command (USEUCOM) to execute its mission. USAFRICOM has six subordinate component commands, three of which are shared with USEUCOM (see figure 1).

- U.S. Air Forces Africa (USAFAF) is a Service component command dual-hatted as U.S. Air Forces Europe, headquartered at Ramstein Air Base, Germany. It provides forward-based airpower and infrastructure to execute operations in Europe

and Africa and also supports North Atlantic Treaty Organization air operations and planning.

- U.S. Army Africa (USARAF), formerly called the Southern European Task Force, provides mission command and employs forces to set the theater, conduct security force assistance, and provide support to USAFRICOM land operations in Africa. USARAF is located at Vincenza, Italy.
- Combined Joint Task Force–Horn of Africa is a multinational task force designed to fight violent extremist organizations in East Africa through power projection and by building the defense capability and capacity of international partners. CJTF-HOA is based at Camp Lemonnier, Djibouti.
- U.S. Marine Corps Forces Africa (MARFORAF) also has the role of U.S. Marine Corps Forces Europe and is headquartered at Stuttgart, Germany. MARFORAF maintains a Special Purpose Marine Air-Ground Task Force–Crisis Response (SPMAGTF-CR) in the USAFRICOM AOR.
- U.S. Naval Forces Africa (USNAFAF), sharing the role of U.S. Naval Forces Europe (USNAVEUR), also serves as Naval Support Activity Naples, in Naples, Italy. USNAFAF/USNAVEUR maintains the U.S. Sixth Fleet, which consists of permanent and rotational naval forces to conduct ballistic missile defense and other missions within its AOR.
- Special Operations Command Africa (SOCAFRICA) is a functional, sub-unified command in Stuttgart, which serves as the Theater Special Operations Command (TSOC). While USAFRICOM is granted operational control (OPCON) of the TSOC, U.S. Special Operations Command (USSOCOM) maintains combatant command authority.

Of these six subordinate commands to USAFRICOM, only half are singularly focused on a specific mission inside the USAFRICOM AOR. For the purposes

of converting USAFRICOM to a series of JTFs, CJTF-HOA and SOCAFRICA would remain largely intact.

It could be argued that U.S. Southern Command (USSOUTHCOM), like USAFRICOM, maintains a diverse mission set, with no near-peer U.S. competitors within its AOR, and is just as well suited to serve as the pilot CCMD to evaluate the NDAA’s proposed C2 structure. USSOUTHCOM currently has three JTFs within its organizational structure as well as the requisite Service component commands, with a large emphasis on theater security cooperation activities.⁶ The USSOUTHCOM JTFs are Joint Task Force–Bravo, at Soto Cano Air Base, Honduras; JTF-Guantanamo; and Joint Interagency Task Force–South, in Key West, Florida. But unlike USAFRICOM, USSOUTHCOM is not challenged by the fact that three of its four component commands are dual-hatted to support another CCMD. Each Service component command at USSOUTHCOM serves only one combatant commander, and those components have closer proximity and reach-back to forces based in the continental United States. Additionally, USSOUTHCOM’s AOR is not as rife with violent extremist organizations (VEOs), which pose a direct threat to U.S. interests, our allies, and regional stability. USAFRICOM’s one standing joint task force—CJTF-HOA—is focused on combating terrorism and providing stability in East Africa. For these reasons, it would be most logical to expand the JTF structure in USAFRICOM’s AOR, as opposed to USSOUTHCOM’s AOR. To assess the requirements for additional JTFs across the African continent, a basic understanding of the USAFRICOM theater campaign plan (TCP) is required.

USAFRICOM’s Theater Campaign Plan

Published in August 2015, the USAFRICOM TCP is a 5-year plan intended to set conditions for achieving the 10-year regional endstates described in the 2015 USAFRICOM theater strategy. The 5-year campaign mission statement is as follows: “USAFRICOM, with partners,

disrupts and neutralizes transnational threats, protects U.S. personnel and facilities, prevents and mitigates conflict, and builds African partner defense capability and capacity in order to promote regional security, stability, and prosperity.”⁷ To meet mission requirements, the plan defines decisive, shaping, and sustaining efforts for campaign execution. Decisive efforts are those “focused on building African partner capacity and strengthening partnerships.”⁸

The shaping effort is focused on disrupting and degrading VEOs to set the conditions for success of the decisive effort in time. Sustaining efforts support the other two efforts by ensuring the force and theater are set for the campaign. The campaign lists five lines of effort (LOEs), each with supporting intermediate objectives (IMOs), tied to the plan’s endstates. These LOEs are listed in priority order, and other than LOE 5, they can be attached to a specific geographic area.

- LOE 1. Neutralize al Shabaab/transition African Union Mission in Somalia
- LOE 2. Degrade violent extremist organizations in Sahel-Maghreb/contain instability in Libya
- LOE 3. Contain and degrade Boko Haram
- LOE 4. Interdict illicit activity in Gulf of Guinea/Central Africa
- LOE 5. Build peacekeeping/humanitarian assistance and disaster relief capacity of African partners.⁹

Structure Challenges in a Resource-Constrained Environment

A key assumption of this proposal is the continued desire to minimize the U.S. military footprint in Africa. The vast size of the continent, African sensitivities to a colonial presence, and the lack of political will to establish a large overseas force structure all serve as contributing factors toward the small U.S. presence. Accomplishment of the USAFRICOM mission relies on Secretary of Defense–approved force allocation, which often involves agree-



U.S. Air Force C-130 Hercules flies over Hopfenohre Drop Zone while conducting static line airborne operations with paratroopers assigned to Special Operations Command Africa at 7th Army Joint Multinational Training Command's Grafenwoehr Training Area, Germany, September 25, 2013 (U.S. Army/Markus Rauchenberger)

ments to share operational forces and posture locations with USEUCOM and U.S. Central Command. Proposed C2 changes should not increase the military presence in Africa, unless it is required for tactical mission execution.

U.S. special operations will continue to play an outsize role in military operations over conventional forces; therefore, SOCAFRICA will maintain its current role as a TSOC.

Lines of effort articulated in the 2015 TCP are anticipated to remain consistent, although proposed C2 changes should have a measured amount of flexibility to address emergent combatant commander priorities, improved capabilities of our regional partners, and unforeseen threats. However, a functional-based JTF structure should not result in any net increase of headquarters personnel.

Because USARAF is the only Service component command that is not shared with USEUCOM, it is ideally suited for conversion to a JTF for North and West Africa. It is natural to assume that USARAF will need additional headquarters personnel to expand its role to a fully operational joint task force. The expansion of administrative staff, planners, and leadership should result

from a proportional downsizing of personnel from USAFAF, USNAF, and MARFORAF. As stated in Joint Publication (JP) 5-0, *Joint Operation Planning*, “When a CCDR [combatant commander] is directed to create a JTF headquarters, the CCDR creates a joint manning document, sourced as much as possible from CCMD resources, that is forwarded to JS [Joint Staff] J-1 for JIA [joint individual augmentation] sourcing approval.”¹⁰ The manpower shifts should not be made in a vacuum. Service component commands need to provide vital input on what functions and tasks previously performed by staff to support Africa-centric operations should now shift to the new JTF headquarters.

JTF Structure Standup

To support the NDAA’s proposed pilot program, it is recommended that the new subordinate JTF structures be built around existing USAFRICOM TCP LOEs. JP 1-0, *Joint Personnel Support*, states:

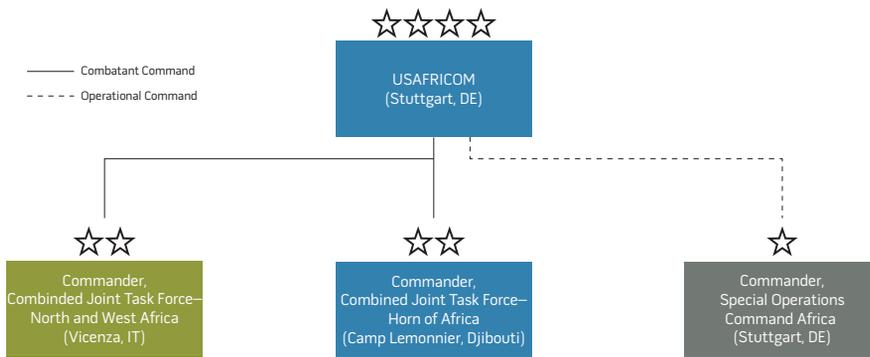
A JTF may be established on a geographical area or functional basis when the mission has a specific limited objective and does not require overall centralized control of

*logistics. The mission assigned to a JTF requires execution of responsibilities involving a joint force on a significant scale and close integration of effort, or requires coordination within a subordinate area or local defense of a subordinate area. The establishing authority dissolves a JTF when the purpose for which it was created has been achieved or when it is no longer required.*¹¹

LOEs 1 through 4 clearly meet the intent of what a JTF could be used for, as described above, and a JTF in support of these LOEs could allow USAFRICOM to maintain focus across the AOR while a JTF deals specifically with the problem sets inherent in the LOEs, a benefit described in the J7’s August 2016 paper on GCC C2 organizational options.¹²

CJTF-HOA, as previously described, is already postured to meet objectives in support of LOE 1. Additionally, ongoing programs within their area of operations are supporting LOE 5 objectives. Given that this JTF is focused on the top priority LOE, there is no need to make extreme adjustments to its structure or mission set. LOEs 2 through 4, however, will require a separate and new C2 organization. It is recommended that a new CJTF–North and West Africa (CJTF–NWA) be

Figure 2. U.S. Africa Command Proposed C2 Organization



created in order to address the problem sets that pertain to those regions and LOEs 2 through 4. Like CJTF-HOA, CJTF-NWA would be responsible for coordinating and executing activities in its area of operations that contribute to objectives that fall within LOE 5's scope. Also, like CJTF-HOA, which serves as a combined JTF, with multinational elements contributing to its staffing and mission execution, the JTF for North and West Africa should be created as a CJTF. As it stands today, the United States and its allies (for example, France, the United Kingdom, Italy) share mutual interests for enduring stability, such as counterterrorism operations, containment of migrant flow, and defense institution building. CJTF-NWA should leverage these shared interests and synchronize partner-nation actions to the benefit of the entire region.

Figure 2 shows the proposed C2 organization for the execution of this pilot program at USAFRICOM. Although each JTF could potentially become disestablished when the JTF's mission has been accomplished, this model assumes sustained relevance for the next 5 years, which would encompass the length of the C2 evaluation period.

Consistent with its theater campaign plan LOEs, USAFRICOM would accept the risk of not having a JTF focused on the southern region of its AOR. This is mitigated by the fact that this region is relatively stable, has no major VEO threat, and its militaries are mostly capable of internal security. As part of its AOR-wide focus, USAFRICOM will support LOE 5 objectives in this region

by planning and coordinating for the use of U.S. Army Regionally Aligned Forces, the Army National Guard State Partnership Program, other military entities, and interagency assets (for example, the U.S. Coast Guard) to meet LOE 5's associated endstate. Geographic boundaries for CJTF-NWA and CJTF-HOA are illustrated in figure 3.

Proposed JTF C2 Structures and Joint C2 Principles

JP 1-0 states that a joint force commander's (JFC's) C2 structure should be centered on its mission, location, and force capabilities, among other things, and the following principles should enable its structure: simplicity, span of control, unit integrity, and interoperability.¹³

The proposed dual CJTF command structure adheres to the principle of simplicity by establishing distinct objectives, tied to LOEs for each JTF. This enables unity of command and clearly defines roles, responsibilities, and authorities across the AOR not only for each JTF but also for USAFRICOM. As for span of control, CJTF-HOA certainly is compliant; however, CJTF-NWA's varied problem sets, objectives, and geography will require its planners to consider the scope and size of activities in relation to its force capabilities in the AOR. Conversely, the addition of CJTF-NWA into USAFRICOM's AOR will support the combatant command's ability to positively affect its span of control.

Unit integrity is maintained when forces assigned to the JTF align with

their designated C2 organization, which maximizes their effectiveness. There are no outstanding issues with unit integrity in the proposed JTF construct; however, JTF commanders with OPCON authority to reorganize assigned units should only do so if there is a compelling case for it. To facilitate interoperability, USAFRICOM will need to ensure shared understanding across its staff and both JTFs regarding its systems, structure, liaison requirements, battle rhythm, and seams that affect the entire AOR. At the same time, each JTF must do the same with its assigned forces as they work to meet objectives. Additionally, interoperability should be extended to CCMD and JTF coordination with Embassy country teams in the AOR to ensure a whole-of-government approach to problems sets and activities within the region. SOCAFRICA would need to maintain close coordination and interoperability with both CJTFs since the special operations mission set would extend into the geographic borders of both CJTF-NWA and CJTF-HOA.

JP 3-33, *Joint Task Force Headquarters*, establishes doctrine for the "formation and employment of a JTF headquarters to command and control joint operations."¹⁴ It not only provides clarification on the organization of a new joint headquarters but also discusses command and staff responsibilities and the management of subordinate commands within the JTF. Although beyond the scope of this article, JP 3-33 would be instrumental to the formation or revision of a JTF within USAFRICOM's structure.

Conclusion

Because one of the geographic combatant commands will likely be selected to evaluate a new system of JTF command and control, USAFRICOM is the ideal theater to test this C2 structure for many reasons. First, the existence of CJTF-HOA has demonstrated this concept over the past 15 years in the eastern part of the USAFRICOM AOR, and it serves as a template for a combined, multi-Service headquarters with an enduring mission set. As an economy of force command with limited assigned

forces, USAFRICOM would benefit from restructuring its antiquated system of Service component commands to maximize efficiencies and reduce unnecessary headquarters staff. This slimmer, mission-oriented C2 structure would allow USAFRICOM to adapt rapidly to the many emergent crises and missions that develop within its AOR. Finally, the absence of any current or planned major combat operation gives the combatant commander wide latitude to explore a new system of command and control, without affecting the time, effort, and resources dedicated to the development of operational plans. Eliminating the Service component commands at a CCMD assumes that Services are better suited to serve as force providers based not on geographic boundaries, but rather on the capabilities required for a given JTF mission set.

To convert the current Service component-based subordinate command structure to the proposed dual-JTF structure, the Unified Command Plan should codify the changes to USAFRICOM's C2 structure and specify a set time period for evaluation of the new process. Additionally, fresh updates to the various memorandums of agreement for apportionment of forces between USAFRICOM and USEUCOM would be necessary to enable the prompt exchange of military units to execute combat operations, security cooperation events and engagements, and other contingencies as they arise. While there is some inherent risk to this type of an organizational change, the potential benefits and efficiencies from a JTF system of C2 should greatly outweigh the challenges associated with this conversion. The primary advantage of this new JTF structure is that it gives the combatant commander an established subordinate headquarters, empowered to flexibly respond to emergent crises and maintain immediate focus on the threats oriented along TCP lines of effort. Although untested, this new construct could have potential benefits over the conventional system of Service component commands, particularly in the USAFRICOM area of responsibility. JFQ

Figure 3. Proposed JTF Areas of Operation



Notes

¹ U.S. Senate Armed Services Committee, “National Defense Authorization Act for Fiscal Year 2017,” May 16, 2016, available at <www.armed-services.senate.gov/imo/media/doc/FY17%20NDAA%20Bill%20Summary.pdf>.

² Chuck Hagel, speech transcript, National Defense University, Washington, DC, April 2013, available at <<http://archive.defense.gov/speeches/speech.aspx?speechid=1764>>.

³ Lisa Ferdinando, “Carter Proposes Updates to Goldwater-Nichols Act,” *DOD News*, April 5, 2016, available at <www.defense.gov/News/Article/Article/713930/carter-proposes-updates-to-goldwater-nichols-act>.

⁴ Deployable Training Division (J7), “Geographic Combatant Commander (GCC) Command and Control Organizational Options,” Joint Chiefs of Staff, August 2016, available at <www.js.pentagon.mil/doctrine/fp/fp_gcc.pdf>.

⁵ *Ibid.*, 9.

⁶ U.S. Southern Command, “SOUTHCOM Component Commands and Units,” November 5, 2016, available at <www.southcom.mil/aboutus/Pages/Our-Team.aspx>.

⁷ “U.S. Africa Command Theater Campaign Plan 2000-16,” Change One, June 1, 2016, 16.

⁸ *Ibid.*, 18.

⁹ *Ibid.*, 21.

¹⁰ Joint Publication (JP) 5-0, *Joint Operation Planning* (Washington, DC: Joint Chiefs of Staff, August 11, 2011), H-2.

¹¹ JP 1-0, *Joint Personnel Support* (Washington, DC: Joint Chiefs of Staff, May 31, 2016), IV-10.

¹² “Geographic Combatant Commander (GCC) Command and Control Organizational Options,” 9.

¹³ JP 1-0, V-18.

¹⁴ JP 3-33, *Joint Task Force Headquarters* (Washington, DC: Joint Chiefs of Staff, July 30, 2012), i.



Apollo 16 Hasselblad image of Earth from the moon (NASA)

The Role of Space Norms in Protection and Defense

By Audrey M. Schaffer

As an operator in the space and cyber domains, we must partner to influence norms of behavior that preserve and improve the usefulness of the space and cyberspace domains.

—GENERAL JOHN E. HYTEN, USAF
Commander, U.S. Strategic Command

Over the past decade, the United States has participated in a variety of activities intended to shape international norms for outer space activities. The *Oxford English Dictionary* defines a *norm* as “That which is a model or a pattern; a type, a standard.” In the outer space context, norms have come to mean both “top down” high-level principles intended to inform the development of new international legal regimes and “bottom up” best practice guidelines intended to inform day-to-day operations.¹ Both types of space norms have their value, but the latter have received the most

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attention in recent years because of their potential to enhance space safety and sustainability as the number of space actors grows and the nature of space activities changes. Much as roadway traffic rules prevent accidents and reduce congestion, safety-focused “space traffic management” norms, such as limiting debris, avoiding collisions, and sharing space surveillance information, can reduce the likelihood of accidents and protect valuable orbital regimes from the deleterious effects of long-lived space debris. All who operate in space will benefit from a more safe, predictable, and efficient operating environment.

Militaries stand to gain additional unique advantages from widespread adherence to operational space norms. Norms can serve to highlight abnormal behavior, enabling warning of and protection against space threats. Militaries, therefore, should support domestic and international initiatives to shape operational norms of behavior, and they should lend their expertise to norm development efforts. As international space norms take shape, militaries can then analyze abnormal behavior, characterizing those specific behaviors they would consider hostile or aggressive and determining how to respond appropriately in different situations. Militaries may also need to consider whether to evolve operational policies and practices to meet behavioral expectations.

Role of Space Norms in Protection and Defense

Norms are not a panacea for constraining aggressive, hostile, provocative, or otherwise deliberately irresponsible behavior in outer space. Norms may be enough to dissuade a rational actor from routinely engaging in irresponsible acts, but they will not prevent a committed aggressor from deliberately disrupting or denying space services it deems detrimental to its interests. Norms, however, can play a critical role in detecting and responding to potential threats.

Norms enable early detection of potentially hostile actions or intentions in space. If a satellite exhibits behaviors

contrary to operational norms, this is a clear flag to monitor its activities more closely. In times of peace, such activities are likely to be nothing more than an anomaly, which may deserve increased monitoring to preserve spaceflight safety or to mitigate harmful electromagnetic interference. In periods of heightened tensions, norms can form the basis of criteria for early indications and warning of potentially aggressive actions.

To have maximum value in identifying “abnormal” behavior, norms should be widely accepted, such as through voluntary guidelines or international standards. Short of explicit international acceptance, national or allied declaratory policies can communicate those behaviors considered to be a demonstration of hostile intent, shaping tacit understanding of acceptable and unacceptable behaviors. If these agreements and/or communications are clear, and norms are generally observed in times of peace, then we can assume in times of crisis that behavior contrary to norms is most likely a deliberate choice. These assumptions will be a critical input to crisis decision-making and, by extension, may have a significant effect on crisis stability. Both an under-reaction and over-reaction to anomalous behaviors could have serious and unintended consequences for international peace and security.

To the extent that the international community can observe what is happening in space, norms will shape world opinion about these behaviors, branding them as simply irresponsible or something more egregious such as potentially unlawful. This will require, at a minimum, compelling evidence based on space situational awareness information from a trusted source. Confirmation from multiple, independent, international, and/or commercial sources of space situational awareness will have a positive and reinforcing effect on detecting bad behavior in outer space.

Nations may condemn those who choose to engage in behavior contrary to norms. Condemnation, however, is a double-edged sword; a nation cannot take others to task for violating international norms and simultaneously seek to

operate with impunity. At first glance, military space operators may bristle at the implication that norms may constrain their freedom of action in space. Militaries, though, already accept legally binding constraints in all domains. For example, fundamental to the conduct of modern warfare is international humanitarian law (also known as the Law of War or the Law of Armed Conflict),² which seeks to limit the effects of conflict, especially on noncombatants. Militaries around the world translate international humanitarian law into rules of engagement that guide servicemembers.

A future space norms regime could be fashioned similarly to other regimes that govern activities in shared spaces and allow for differences in the application of rules to government or military actors and private actors. For example, Article 3 of the Convention on International Civil Aviation provides that the Convention does not apply to “state” aircraft, though such aircraft are required to exercise due regard for the safety of navigation of civil aviation.³ Article 48 of the Constitution of the International Telecommunication Union likewise provides freedom for military radio installations, but requires them, so far as possible, to observe provisions to prevent harmful interference.⁴ As in these other domains, safety and sustainability focused space norms, while remaining good and responsible practice no matter the situation, need not be strictly adhered to by militaries at all times.

Even if militaries are not expressly required to follow norms, they nonetheless should be prepared to make more deliberate behavioral choices because of how actions inconsistent with norms will be interpreted. This not only requires a strategic and holistic perspective on national security space behaviors, especially in periods of crisis, but also creates opportunities for deliberate signaling. Just as increasing airborne reconnaissance or forward-deploying aircraft carriers can demonstrate interest and stake, so too can maneuvering satellites demonstrate readiness and resolve. Ensuring that the desired signals are received requires significant communication and/or agreement on norms of behavior well in advance of a crisis.



Air Force Chief of Staff General David Goldfein testifies before Senate Armed Services Subcommittee on Strategic Forces, May 17, 2017, as part of examination of military space organization, policy, and programs (U.S. Air Force/Scott M. Ash)

Norms also provide clarity to acquirers, operators, and decisionmakers. Similar to how the Department of Defense (DOD) reviews all new weapons systems to ensure they can be operated in accordance with international law, acquirers and operators could look to space norms for guidance on what capabilities and actions would be permissible and under what circumstances. This ensures resources are not expended on systems that political leaders will not employ and provides guidance for operational planners on how to protect and defend space systems in a manner that will be deemed acceptable in different situations.

Norms—or rather the violation thereof—also enable the creation of thresholds, triggers, and rules of engagement that allow militaries to employ passive or active measures to protect threatened space systems. Norms, ironically, may enhance freedom of action when it is needed most. Because norms support the development of criteria for judging hostile acts or hostile intent in space, they enable actions to be taken in self-defense.

Current State of Space Norms

Today one could argue that there are either few norms or many norms,

depending on the type of norm being described.⁵ The 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (the “Outer Space Treaty”) provides a broad legal framework and principles for outer space activities.⁶ Many Cold War arms control treaties contain generic provisions on noninterference with “national technical means,” understood to include space-based reconnaissance and warning satellites.⁷ The 2002 Hague Code of Conduct Against Ballistic Missile Proliferation requires prelaunch notification of space vehicle launches.⁸ None of these commitments, however, contain pragmatic space traffic management norms for day-to-day operations.

Some operational space norms have been codified. For example, the 2007 Space Debris Mitigation Guidelines of the United Nations (UN) Committee on the Peaceful Uses of Outer Space (COPUOS) outline general practices for limiting the creation of long-lived space debris.⁹ The various instruments of the International Telecommunication Union govern spectrum usage and deconfliction, including to and from space.¹⁰ Arguably other norms exist, such as following basic

procedures for launch safety and operator training, as well as implementing more advanced practices like conjunction assessment screening and collaborative collision avoidance. Most of these operational norms, however, are not codified.

The present situation is beginning to change due to the efforts of the Working Group on the Long-Term Sustainability of Outer Space Activities within the Scientific and Technical Subcommittee of UN COPUOS. Since 2009 the working group has been developing best-practice guidelines for the safe and sustainable use of outer space. The group agreed on a first set of 12 guidelines in June of 2016 and is expected to forward a final compendium of guidelines to the UN General Assembly for adoption in the fall of 2018.¹¹ But this effort is largely codifying behaviors already implemented by spacefaring nations.

Catalyzing Space Norm Development

Operators who agree that shared norms of behavior will benefit all can help catalyze their development. A more deliberate approach to sharing and harmonizing best practices may establish operational norms more quickly, yielding benefits in the near term.

Norms will emerge naturally over time. Commercial operators, guided by a desire for a predictable environment, efficient operations, and regulatory stability, will self-organize and/or work with governments to shape pragmatic operational norms.¹² These organic processes, though, may not result in universally accepted norms in time to prevent a catastrophic incident.

Commercial actors should lead activities to shape, in a proactive manner, the development of international space norms. The policies and practices of established operators, developed and refined through decades of experience, should be the baseline for a discussion of routine and responsible behavior. Individual operators almost certainly have documented their standards, procedures, and other rules for operating safely in different situations and orbital regimes. Operators should share these practices

with one another to draw broad guidelines and best practices. As these practices are refined over time and adopted by a larger proportion of those operating in space, they will increasingly be recognized as norms of behavior.

Role of Militaries

Military and other governmental operators should participate in norms development processes because they have decades of space operational experience to bring to bear. Like any operator, militaries and other governmental agencies have policies, procedures, and standards for mitigating risks, whether they be mission, safety, political, or military, that can serve as a starting point for norms development discussions.

In some cases, militaries or governments will have relevant unique operational experience to lend to norm development efforts. Militaries can contribute by making policies publicly available as an input to discussion. For example, DOD Instruction 3100.11, *Management of Laser Illumination of Objects in Space*, describes those practices that DOD follows, and recommends others follow, to minimize the risks from inadvertent laser illumination.¹³ Militaries can also directly leverage their unique expertise to partner with industry in developing standards and norms for specific types of operations. For example, a new program of the Defense Advanced Research Projects Agency intends to foster the development of standards and norms for rendezvous and proximity operations through the creation of a non-governmental consortium.¹⁴ Militaries can likewise be active participants in international negotiation of standards and guidelines relevant to national security activities. For example, DOD has participated in the development of the space surveillance data standards of the Consultative Committee on Space Data Systems and the long-term sustainability guidelines of UN COPUOS.¹⁵

Militaries will benefit by being involved in the norm development process because military activities will, over time, largely follow established norms even if not required to do so. As norms take

shape and the balance of activity in space becomes commercial, rather than government- or defense-oriented, military behaviors will be more easily detected and highlighted (and potentially unsafe) if they do not conform to widespread practices. Militaries, therefore, should participate in norm development processes, both to lend their expertise and to ensure that they can follow emerging norms in their routine operations. Military requirements, however, should not drive the conversation because military operators will always have unique requirements and a need for flexibility in crisis and conflict.

Identifying Operational and Legal Thresholds and Triggers

Once operators collectively establish what normal behavior looks like, militaries should begin to identify which abnormal behaviors they might consider aggressive, hostile, or otherwise provocative. Behavior must always be considered within a geopolitical context, but identifying clear thresholds and triggers for indications and warning and possible defensive responses will ultimately enable protection of critical military space systems.

Developing thresholds should take into account warning and defensive capabilities. For example, if on average militaries around the world were hypothetically only able to distinguish objects 50km apart in geosynchronous orbits, then deliberately bringing a satellite closer than 50km could be considered provocative. Similarly, if space surveillance systems hypothetically require 24 hours to register changes in the orbit of a given object, then maneuvers that would result in dangerously close approaches in less than 24 hours also could be considered provocative.

Legal analysis should be applied to discussions of thresholds and triggers because operational criteria for hostile behavior should be considered in the context of international law. Factors that governments would take into account when determining whether a hostile act or use of force was evidence of an actual or imminent armed attack will be critical

components of crisis decisionmaking. Military lawyers, like operators, must work through different scenarios to explore how to apply to space activities legal principles such as prohibitions on the use of force and the inherent right of self-defense. This legal analysis, as well as legal analysis of the application of international humanitarian law to space activities, must be flowed back into operational rules of engagement. If conflict does extend to space, militaries must understand how to act in accordance with international law.

Guidance on how international law applies to space would be akin to guidance that exists for other domains of warfare. The *San Remo Manual on International Law Applicable to Armed Conflicts at Sea*,¹⁶ *Humanitarian Policy and Conflict Research Manual on International Law Applicable to Air and Missile Warfare*,¹⁷ and *Tallinn Manual 2.0 on the International Law Applicable to Cyber Warfare*¹⁸ each capture military practice and academic theory in the application of international law to conflict in their respective domains. The newly launched *Manual on International Law Applicable to Military Uses of Outer Space* project aims to do the same for space.¹⁹

Operational and legal analysis must be done in concert with allies and partners and eventually be shared more broadly. Allies must have a common view of behaviors they would consider crossing a particular threshold so as to remain unified in crisis and conflict. This view should at least be communicated to non-allied countries, so as not to inadvertently trigger a destabilizing response.

Evolving Military Policies and Practices

As norms emerge, militaries should take stock of their behaviors and determine whether to change policies and practices in light of new international expectations. Conforming military behavior to international norms may require changes to operational tactics, techniques, and procedures in the short term, but it is the only long-term approach. Routinely operating outside of established norms will serve only to highlight military activities rather than

allow them to coexist with growing commercial and other nongovernmental activity in space.

In all likelihood, international norms will drive national security space activities to become increasingly transparent, especially as growing congestion forces more collaborative spaceflight safety practices. Longstanding approaches to protecting sensitive space activities will become obsolete, requiring the national security community to find new ways of maintaining operational security. These changes will present challenges in the short term, but the most capable and innovative actors will find ways to achieve their military objectives in an evolving environment. Those who are able to adapt the most quickly will find that they have the greatest freedom of action.

Conclusion

The time to start developing norms for responsible behavior in outer space is now. In addition to the safety and sustainability benefits that will be enjoyed by all who operate in space, norms will enable the protection and defense of capabilities critical for national security. Militaries, therefore, should strongly support activities to develop international norms, even if they are not primary actors in those processes. As norms emerge for routine operations in space, militaries should then develop criteria, both operational and legal, to determine which abnormal behaviors represent potential threats. Militaries may also need to consider whether their behavior should evolve to conform to widely accepted practices that enhance safety and predictability for all who operate in the domain.

The goal of the United States is to prevent conflict from extending into space; however, we must also be prepared to defend against aggressive acts by others. The criticality of space systems for national security demands that we not only understand how space supports terrestrial military activities, but also recognize when others are deliberately seeking to take those advantages away. Space norms support defense and protection of critical space capabilities. JFQ

Notes

¹ Gregory L. Schulte and Audrey M. Schaffer, "Enhancing Security by Promoting Responsible Behavior in Outer Space," *Strategic Studies Quarterly* 6, no. 1 (Spring 2012), 9–17.

² For more information on the body of law that constitutes international humanitarian law, see International Committee of the Red Cross, "What Is International Humanitarian Law?" available at <<https://www.icrc.org/en/download/file/4541/what-is-ihl-factsheet.pdf>>.

³ "Convention on International Civil Aviation," December 7, 1944, *United Nations Treaty Series* 15 (New York: United Nations, 1948), 298.

⁴ "Constitution and Convention of the International Telecommunication Union," December 12, 1992, *United Nations Treaty Series* 1825 (New York: United Nations, 1998), 362–363.

⁵ Schulte and Schaffer.

⁶ "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies," October 10, 1967, *United Nations Treaty Series* 610 (New York: United Nations, 1970), 205–212.

⁷ For example, in Article V of the Interim Agreement Between the United States of America and the Union of Soviet Socialist Republics on Certain Measures with Respect to the Limitation of Strategic Offensive Arms ("SALT I"), the parties undertake not to interfere with the national technical means of verification of the other party.

⁸ "Hague Code of Conduct Against Ballistic Missile Proliferation," November 22, 2002, available at <http://www.hcoc.at/?tab=what_is_hcoc&page=text_of_the_hcoc>.

⁹ United Nations Office of Outer Space Affairs, *Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space* (Vienna: United Nations, 2010).

¹⁰ In addition to the Constitution and Convention of the International Telecommunication Union, the ITU Radio Regulations, as adopted by successive World Radiocommunications Conferences, contain specific provisions on the assignment, allocation, and use of frequencies, as well as interference and interference monitoring.

¹¹ United Nations General Assembly, 71st Session, Official Record, Supplement 20, *Report of the Committee on the Peaceful Uses of Outer Space, Fifty-ninth Session (8–17 June 2016)*, A/71/20 (New York: United Nations, 2016), 22–25.

¹² For example, the Space Data Association (www.space-data.org/sda/about/sda-overview/), a nonprofit association of satellite operators, requires information-sharing and operational coordination among its members to resolve situations related to spaceflight safety and electromagnetic interference.

¹³ Department of Defense Instruction 3100.11, *Management of Laser Illumination of Objects in Space*, October 24, 2016, available at <www.dtic.mil/whs/directives/corres/pdf/310011_dodi_2016.pdf>.

¹⁴ Defense Advanced Research Projects Agency, "Broad Agency Announcement, Consortium for Execution of Rendezvous and Proximity Operations (CONFERS)," December 20, 2016, available at <www.fbo.gov/utills/view?id=55c9be0d0ca9b1a4a2b134097c21c679>.

¹⁵ For more information on the Consultative Committee on Space Data Systems, see <<https://public.ccsds.org/default.aspx>>.

¹⁶ Louise Doswald-Beck, ed., *San Remo Manual on International Law Applicable to Armed Conflicts at Sea* (Cambridge: Cambridge University Press, 1995).

¹⁷ Program on Humanitarian Policy and Conflict Research (HPCR) at Harvard University, *HPCR Manual on International Law Applicable to Air and Missile Warfare* (Cambridge: Cambridge University Press, 2013).

¹⁸ Michael N. Schmidt, ed., *Tallinn Manual 2.0 on the International Law Applicable to Cyber Operations* (Cambridge: Cambridge University Press, 2017).

¹⁹ For more information on the *Manual on International Law Applicable to Military Uses of Outer Space*, see <www.mcgill.ca/milamos/home>.

Largest amphibious landing since end of World War II,
September 15, 1950, at Inchon Harbor, Republic of Korea
(U.S. Army/31st Infantry Regiment)



Time in War

By Phillip S. Meilinger

Go sir, gallop, and don't forget that the world was made in six days. You can ask me for anything you like, except time.

—NAPOLEON

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Time has always been considered a key element in war. Speed, by definition, derives from time: “distance traveled divided by the time of travel” is the usual definition. Over two millennia ago, Sun Tzu remarked on its importance, noting that “speed is the essence of war” and “divine swiftness” is to be “esteemed.”¹ Carl von Clausewitz believed similarly, commenting that time had a major psychological effect that would help provide secrecy as well as speed.² Not just theorists, but also practitioners (such as Napoleon as quoted in this article’s epigraph) have recognized the importance of time and timing in war. But what is time?

There are several ways to describe the concept, but most consider time to be a straight line. Things begin, they develop, and they end. One can remember or read about the past, but we cannot go back; time marches inexorably forward, and the future remains unknown.

Albert Einstein introduced a new concept: time was flexible and relative. Physicists have adapted this bendable concept of time when discussing cosmology. For theologians, God is both timeless and endless; He always was and always will be. Moreover, God's time is not an arrow but a circle: He sees all—past, present, and future—whichever way He chooses to look.³

Besides its physical and theological aspects, time also has a psychological component, which we all experience. Although the clock ticks on rhythmically, we often feel it differently. On some days, the clock appears to move very slowly—when we are waiting in anticipation for something to occur. On other occasions, time appears to accelerate—as when we are enjoying ourselves and want to prolong the moment.

For the military, it is the notion of time as an arrow—the orderly sequencing of events—that matters most. Yet the psychological aspect of time, especially its apparent suddenness, is also of great importance, especially in military operations. John Boyd, an Airman and theorist of war, devised his famous OODA Loop—Observe, Orient, Decide, Act—to illustrate the cycle through which the human mind makes decisions. Boyd posited that the side whose OODA Loop was quicker—who acted most appropriately in the fastest time—would have an advantage.⁴ Military forces also use terms like *tempo* and *synchronization* to explain the importance of conquering and best utilizing time in their operations.⁵

An example I have often used to illustrate this psychological effect concerns the fates of Carthage and Hiroshima. The Third Punic War ended with the defeat of Carthage at the hands of Rome. When defeating the African power in 146 BCE, the Romans wanted to ensure there would be no Fourth Punic War, so they razed Carthage; killed its inhabitants or

sold them into slavery; and then, as tradition has it, sowed the ground with salt so nothing would grow.⁶

On August 6, 1945, a single B-29 bomber took off from the Mariana Islands, and at 0815 it arrived over Hiroshima and dropped a single atomic bomb. The horrible blast and radiation effects of the bomb on the structures, people, and land of the Japanese city were not all that dissimilar from the effects of the Romans' actions at Carthage two millennia earlier.⁷ The difference between the two events was that the destruction of Hiroshima was effected virtually instantaneously by one weapon, and not over a period of years by several legions. It was the conquest of time, not of matter, that so stunned the world—both then and since.

Time and Land Warfare

There have been countless examples of when time played a key role on the battlefield. At Borodino in September 1812, Napoleon met the Russian army outside Moscow. He thought it could be the decisive battle of the war—a victory would destroy the enemy army, open the door to the capital city, and force the tsar to surrender. Yet the Emperor was reluctant to use all his troops in the battle, especially his Old Guard. One general who was on the scene reported that Napoleon stated, “I want to see more clearly. . . . My battle hasn't begun yet. . . . The day will be long. You have to know how to wait. Time always has to be considered. . . . Nothing is clear yet.” He then asked an aide what time it was, and when told, Napoleon remarked, “The time for my battle hasn't come yet. It will begin in two hours.”⁸ But the Emperor had miscalculated. In 2 hours, the battle was already decided; his timing was off, and the Russian army survived to fight again. Napoleon would lose the war.

On the second day at Gettysburg, Confederate Lieutenant General James Longstreet was to attack the Union left wing in conjunction with other unit attacks on the Union's right and center wings. But his corps took the wrong road and was several hours late getting

into position. What if Longstreet had attacked in coordination with his comrades as General Robert E. Lee had intended instead of the piecemeal attacks that did occur? One historian summed up the day by stating, “Lee's offensive, based upon attacks in progression until it developed into a giant pincers squeezing both enemy flanks, required careful coordination and expert timing.”⁹ For the Confederates, that timing was off.

The Schlieffen Plan was devised in Germany in the last decade of the 19th century by the Chief of the Great General Staff, Field Marshal Alfred von Schlieffen. The plan posited a worst-case scenario of a two-front war. To be successful, Schlieffen believed that Germany had to hold in the East against Russia and then strike quickly in the West against Belgium and France, knocking them out of the war to enable a turn back to the East in time to meet the lumbering Russian army as it moved toward Germany. It was assumed that the Russians would take 2 months to mobilize and thus would not initially be a serious threat. Therefore, the war in the West had to conclude within 2 months. Schlieffen retired in 1905, and over the next decade his successor, Field Marshal Helmuth von Moltke (nephew of the great von Moltke who was a hero of the German wars of unification) continued to tinker with the plan. Unfortunately, the necessity of maintaining a rigid time schedule for the huge military turning movement that would move through Belgium and northern France remained a dominant feature.¹⁰

When war broke out in July 1914, von Moltke feared the Russians would mobilize and attack more quickly than had been anticipated, which they did. As a result, he ordered six of his army corps detached from the Western arm to bolster the East. For this and other reasons, the rigidly timed attack in the West went awry. The German armies fell behind schedule and had to readjust their timing. Gaps also developed between the armies as they maneuvered to readjust; the French and their British allies noticed the faulty German dispositions and hurried to act. Even so, it was a close-run thing. As the German armies moved to

the Marne River shielding Paris, a hastily cobbled-together French army was rushed to the front just in time—partly by 2,000 Parisian taxicabs—and managed to deliver a decisive tactical check to the enemy.¹¹ The carefully timed Schlieffen Plan had fallen apart, and the Western Front soon devolved into a stagnant trench war of attrition that would last for much of the next 4 years.

In June 1950, North Korea attacked across the 38th parallel demarcation line into the south. Caught unprepared, Republic of Korea (ROK) forces precipitously retreated south. The United Nations (UN) appointed General of the Army Douglas MacArthur, the U.S. commander in Japan, to lead a coalition against the aggression, and he began deploying U.S. troops and air assets based in Japan into South Korea to help stem the tide, and reinforcements were hastily ordered from the United States. Initially, this did not work; the UN and ROK troops were pushed into a perimeter at Pusan on the southern tip of the peninsula, but MacArthur was planning a counterstroke. Operation *Chromite* was to be an amphibious assault at Inchon, the port city near Seoul, which would take place in mid-September. As one historian phrased it, “One of General MacArthur’s outstanding attributes, demonstrated quite often in World War II, was a keen sense of timing.”¹² His forces would not be ready for the operation until mid-September, but waiting until October would be too late for his forces in Pusan. The window of opportunity was narrow.

The obstacles at Inchon were formidable. The tides often exceeded 30 feet, and when the tide was out, the mudflats left behind were so soft and deep as to preclude movement. Twice a day, the tides came in, but the time available for an assault to occur was only 3 hours. After that, the retreating tide would leave the attackers and their craft stranded on the mud for the next 12 hours—sitting ducks for the defenders. On September 15, the UN forces landed at Inchon, totally astonishing the North Korean defenders. The assault force landed at high tide, disgorged its troops, and the landing

craft backed out before the tides began to recede. It was a brilliant maneuver, perfectly timed, against what many thought were hopeless odds.¹³ Concurrently, MacArthur directed an assault by his forces at Pusan timed to coincide with Operation *Chromite*; the North Koreans were caught in an enormous vise. The aggressors fled north to escape that trap even faster than they initially had moved south.¹⁴

Timing and Air Warfare

Between the wars, U.S. thinkers and planners at the Air Corps Tactical School devised a doctrine for employing heavy bombers in a future war. They settled on an “industrial web” theory that likened an economy to a spider’s web—all was interconnected, and damage anywhere in the web would reverberate throughout the entire structure with dramatic effects. This theory also hypothesized that certain resources or facilities were more important to the successful operation of an economy at war than others. Typical ideal target sets included oil refineries and storage facilities, the electric power grid, steel plants, and armament factories, among others.¹⁵ In addition, it was believed that gaining air superiority was crucial to ultimate victory; therefore, destroying aircraft and engine factories was just as important as destroying the aircraft themselves.

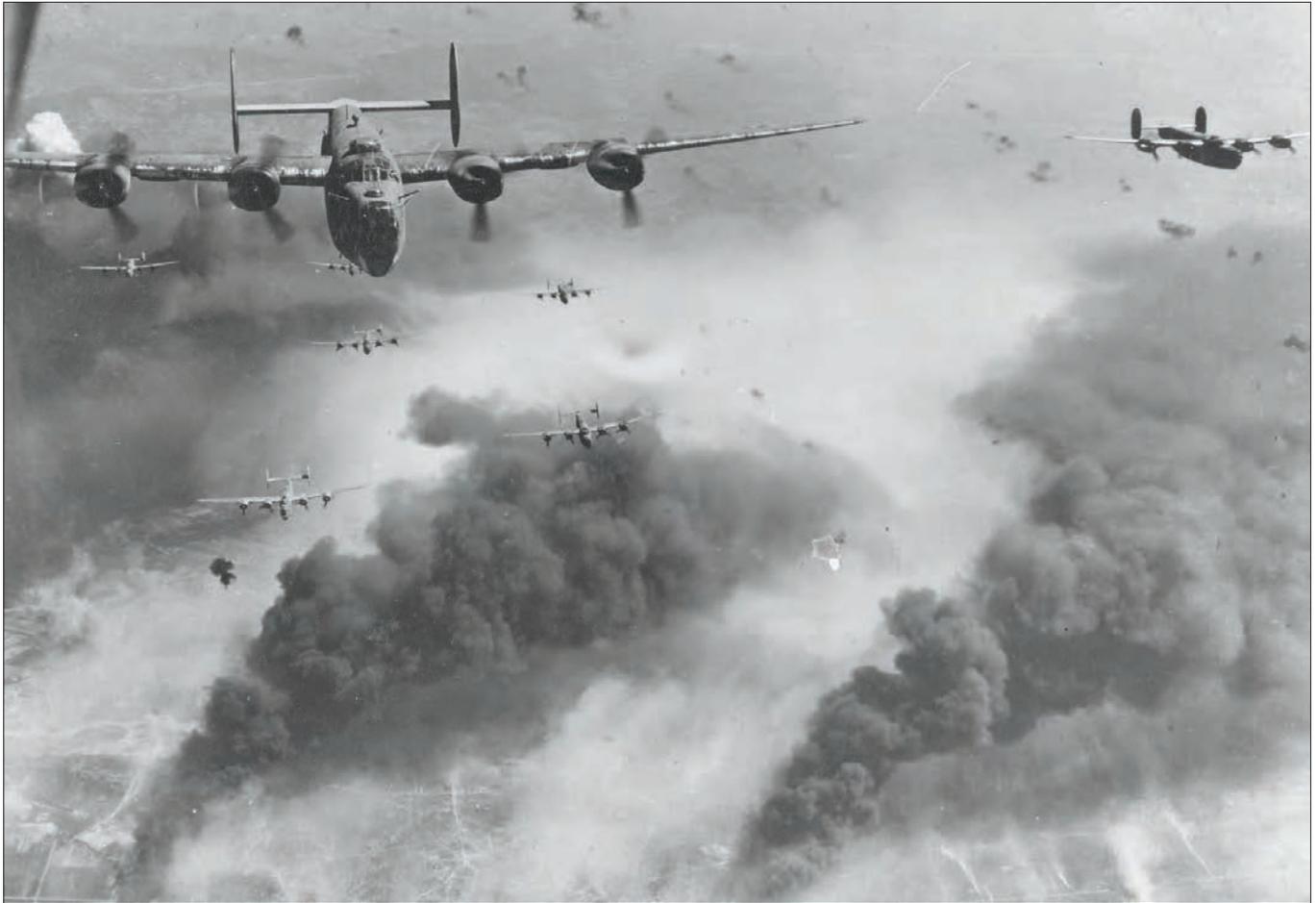
Germany had little internal oil resources, and during peacetime most had to be imported. When Adolf Hitler launched the war, one of his first objectives was to secure the oil fields and refineries of Romania. These resources, centered around the town of Ploesti, would soon supply over 60 percent of Germany’s crude oil supply.¹⁶ Air planners argued that knocking out this complex would have a disastrous effect on Germany’s “web.”

From the nearest Army Air Force bases in Africa, the attack would be a deep strike over hostile territory (1,200 miles each way). Moreover, the refineries themselves were heavily defended by anti-aircraft guns and enemy fighter aircraft. Planners therefore suggested a low-level

attack (300 to 500 feet) using B-24 heavy bombers to strike the complex in a coordinated attack. Nearly 200 bombers would be used and, given the unusual tactics as well as the extreme distance, the B-24s were fitted with extra fuel tanks and supplied with a low-level bomb-sight. In addition, the crews practiced over the Libyan desert, flying low and dropping practice bombs on a dummy complex built to resemble that at Ploesti. Complete rehearsals were flown on July 28 and 29, and on both days the mission went flawlessly, “completely destroying” the dummy site.

On August 1, 1943, 177 planes in five groups took off from Libya and headed east. Beforehand, crewmen were told to write letters home and leave them on their cots—if they did not return, the letters would be mailed. It was not long after takeoff when things began to go awry. The weather was far different from the endlessly clear skies over the Libyan desert, and thunderstorms en route broke up the formation. Radio calls would have assisted planes to rejoin the formation, but the crews were told to maintain radio silence so as not to tip off the enemy. Things worsened.

As a result of the disruption in timing caused by the formation breakup, two bomber groups arrived over the target well before the rest of the force—thus alerting the defenses for those coming behind. Two other groups misidentified a checkpoint and turned too early; they flew all the way to Bucharest before realizing their mistake. This too alerted defenses and scrambled Luftwaffe fighters. Another group encountered heavy anti-aircraft fire approaching Ploesti, so it made an unplanned deviation to the east to avoid the threat. The result of these snafus was an uncoordinated attack as most of the bombers blew in piecemeal from different directions and altitudes as opposed to the plan of arriving at the target en masse in a single formation. Colonel Leon Johnson—awarded the Medal of Honor for his actions that day—later wrote, “We flew through sheets of flame, and airplanes were everywhere, some of them on fire and others exploding.”¹⁷ Upon departing



Through flak and over destruction created by preceding waves of bombers, 15th Air Force B-24 Liberators leave Ploesti, Rumania, after one of long series of attacks against primary oil target in Europe, August 1, 1943 (U.S. Air Force/Jerry J. Jostwick)

the area, instead of reforming for the journey home, the groups pressed on by themselves stretched out over 100 miles, making them easier prey for enemy fighters. By the time it was over and the B-24s straggled back to Africa, 54 bombers were lost as well as 532 Airmen. Only 3 of the 177 bombers that had started the mission were still fit to fly the following day. To illustrate the harrowing nature of the mission, five Medals of Honor were awarded that day—the most ever for a single air operation.

The keys to success at Ploesti were to be “surprise and razor-sharp timing,” but both were lost and the result was carnage. It would not be until April 1944 that the Army Air Force attempted further attacks on Ploesti—and those attacks were conducted at high altitude in standard air group formation.

Schweinfurt was Germany’s major production center of ball bearings, which

practically all mobile weapons relied on. This was a “bottleneck” target whose destruction prewar air planners believed would have a disproportionate effect on the German economy. Regensburg, a nearby city, had a large Messerschmitt factory that produced 48 percent of the Luftwaffe’s fighter aircraft. In the summer of 1943, planners thought they knew how to neutralize them.¹⁸ Due to the lack of long-range escort fighters to accompany the bombers deep into Germany—a major shortcoming of airpower thinking between the wars—it was concluded the bombers would suffer heavy losses at the hands of the Luftwaffe fighter force. Planners therefore decided to throw the enemy a curveball. There would be two separate waves of bombers. The first would depart bases in England and head directly for Regensburg. Spitfires and P-47s would accompany them for the first part of their journey, but would be

forced to turn back when low on fuel. The bombers would then be hit hard by interceptors, but after striking the target they would turn south for North Africa rather than reverse course and return to England. It was believed this would so surprise and confuse the defenders that the second half of the bombers’ journey would be fairly easy.

A second wave of bombers would depart England 10 minutes after the first and would head for Schweinfurt. The close arrival of the second wave was timed so it would arrive over the target while the Luftwaffe fighters were back on the ground refueling and rearming. They would be airborne again within 30 minutes, but the planners figured this would allow the bombers to get to the target relatively unscathed—although afterward they would have to fight their way back to England.

In other words, the timing of the two-wave assault would mean the first wave (Regensburg) would only have to defend itself on the way into the target, whereas the second wave (Schweinfurt) would only have to fight on the way home. It made sense.

Crews were awakened at 0130 and served *real* eggs and bacon for breakfast—they knew something was up, and many referred to the meal as “the Last Supper.”¹⁹ In the briefing room, the map showing their target for the day was covered by a cloth, but the crew members had learned that a string with a bob at the end would trace their route of flight; more string left hanging at the bottom of the chart meant the target would be close to the coast and therefore include escort. Today, there was no string showing. This would be a very deep strike, unescorted.

Unfortunately, heavy fog rolled into England the morning of August 16, 1943. The first wave of 146 bombers had no choice but to take off because its timetable required it to land at the unfamiliar North African bases before dark. Fortunately, Colonel Curtis LeMay, who led the first contingent, had trained his men rigorously on instrument takeoffs and climb-outs. The training paid off, and not a single bomber was lost during the form-up.

But the takeoff of the second wave of 230 bombers, led by Brigadier General Robert Williams, was then delayed for over 3 hours. The crewmembers knew exactly what this meant: they would engage a freshly fueled, armed, and rested fighter defense not only into their target, but on the return as well. Their escort fighters could not offer much help and would have to turn back upon reaching the German border. There would be hell to pay.

As expected, the first wave of bombers led by LeMay endured heavy attacks inbound to Regensburg—losing 14 aircraft while they were still more than 100 miles from the target. Ten more were lost over the city—but their turn south did indeed catch the defenders by surprise. As a result, the bombers’ 5-hour journey to North Africa was largely uneventful.

On the other hand, Williams’s unescorted Schweinfurt crews were hammered both to and from the target—over 300 Luftwaffe fighters pounced on them. Overall, the Eighth Air Force would lose 60 bombers that day; another 100 bombers were so heavily damaged that they would not fly again, and well over 550 aircrew were dead, missing, or captured. This toll amounted to over 20 percent of the attacking crew force and nearly 60 percent of the airframes—losses that were completely unsustainable. It was not difficult for even the most mathematically challenged crewman to figure his odds: such losses would mean the entire bombing force would theoretically be annihilated in 5 missions, yet they were required to fly 25 combat missions.

In short, both missions had relied on superb timing to achieve success. But in both cases that timing broke down and resulted in disaster.

A basic tenet for Airmen concerns the importance of command of the air. For aircraft to operate effectively, the opposing air force and air defenses must first be neutralized. One method of achieving air superiority is defeating enemy interceptors in the air, but another is attacking the aircraft while they are still on the ground and at their most vulnerable.

During Operation *Rolling Thunder*, the air interdiction campaign against North Vietnam between 1965 and 1968, U.S. aircraft flying north were met by extremely heavy enemy air defenses—antiaircraft artillery, surface-to-air missiles (SAMs), and MiG fighters. These defenses were deadly, yet they could not be systematically attacked. Rules of engagement (ROE) stated that SAM sites could not be hit while being built and still harmless. Similarly, MiG airbases were off limits—enemy aircraft could only be attacked if actually airborne. Achieving air superiority under these rules appeared impossible.

In 1966, Airmen at bases in Thailand devised a plan to destroy MiGs while still adhering to the ROE. Colonel Robin Olds, commander of the 8th Tactical Fighter Wing at Ubon, took the lead in this effort. Olds was a bit of a legend in the Air Force; he had been

an All-American football player at West Point, was an ace in World War II with 13 victories, and had married movie actress Ella Raines. Olds devised a plan, Operation *Bolo*, to sucker the MiGs into air combat.

When bomb-laden F-105s were sent north to strike various targets, they were usually escorted by F-4s and “Iron Hand” assets—F-105s equipped with electronic jamming pods and anti-radiation missiles to suppress the SAMs. If MiGs showed up, the F-105s would continue to their targets while the Phantoms engaged the MiGs. The North Vietnamese were aware of these tactics, so they avoided the Phantoms whenever possible.²⁰

Operation *Bolo* proposed that F-4s would mimic the actions of an F-105 strike package. The Phantoms would be loaded with air-to-air missiles (four radar-guided and four heat-seekers) but no bombs; they would use standard F-105 routing, altitudes, speeds, tactics, and call signs. It was hoped that North Vietnamese radar operators would paint the incoming aircraft and assume they were unescorted F-105s. They would then scramble MiG interceptors from the five airfields ringing Hanoi and direct them against the incoming bombers. Not until sighting the Phantoms would the MiGs realize they had been duped. It was then expected that some of the MiGs would peel off and head for home, knowing their landing fields were protected sanctuaries. But Olds was prepared for that: F-4s stationed at Da Nang Airbase in South Vietnam, also mimicking F-105s, would be heading toward Hanoi from the east. Radar would assume these aircraft were also bombers intending to strike targets near the capital. Instead, the Da Nang fighters would head for the MiG bases and orbit overhead. Their intention? When the MiGs fled from the Thailand-based F-4s to recover at their airfields, the Da Nang F-4s would be waiting there. The MiGs would be forced to fight.²¹

Timing was crucial for the plan to succeed. Not only did the F-4s need to mimic the airspeed, altitude, and tactics of the F-105s, but they also had to arrive in separate flights and waves.



Troops of the 31st Infantry Regiment land at Inchon Harbor, September 18, 1950 (National Archives and Records Administration/U.S. Army/Hunkins)

Studying the actions of the MiGs over the previous months, Olds knew they remained airborne for only 50 minutes, less if they used afterburners. The F-4s, even though hitting tankers just prior to entering North Vietnamese airspace, still had only 5 minutes to engage over the target. Accordingly, the MiGs would encounter several waves of U.S. Air Force fighters—arriving at 5-minute intervals—allowing successive aircraft to continue the fight while others departed for home.²² In addition, the Da Nang aircraft also had to arrive over the MiG airfields in a series of waves so as to meet enemy aircraft attempting to flee. If those F-4s arrived too soon, they would run low on fuel before the MiGs showed up; if they arrived too late, the MiGs would have already landed.²³

Other activities had to be precisely timed as well. To ensure secrecy, the aircraft in Thailand and South Vietnam

had to continue their regular routines—combat missions were still flown against normal targets. The F-4s also had to mount the anti-SAM pods carried by Iron Hand—if they did not, North Vietnamese radar operators would be suspicious—but the switch could not be made too soon. The pods were therefore removed from the F-105s at Korat and Takhli and flown by C-130 to Ubon and Da Nang. There, maintenance crews worked all night installing them so they would be ready for Operation *Bolo* in the morning.

As is usually the case in war, the mission did not go as planned. Bad weather meant the Da Nang aircraft did not arrive over the MiG bases as intended. Nonetheless, Olds led his Ubon-based aircraft as scheduled, the North Vietnamese were tricked, 12 MiG-21s scrambled to intercept what they supposed were unescorted F-105s,

and they did run into a buzz saw. Seven MiGs were quickly downed, one by Olds, before they fled for home. Unfortunately, the lack of the Da Nang force meant the remaining MiGs were able to recover safely. Even so, the Ubon crews claimed seven enemy aircraft at no loss to themselves.

What It Means

Time has always been a crucial factor in war, and commanders and planners should give it great consideration when developing strategy and tactics. Although timing in war is a somewhat theoretical concept, it is also essential. As one expert on the subject has stated, “The purpose of theory is to change current doctrine through intellect rather than through the bloody empiricism of extinction.”²⁴ The job of theory is to solve new problems for which current doctrine is inadequate.

Inchon was an example of excellent timing carefully planned and artfully executed. In some cases, however, commanders have too quickly discounted or ignored the importance of time, while on other occasions they have given it too much importance. The Schlieffen Plan was built upon a foundation of quicksand: it imagined an ability to maintain an impossible time schedule given the nature of man, beast, and vehicles. Things usually go wrong in war, yet German generals thought they could overcome such pesky details and proceed with rigid precision. The result was calamity. The same belief in timing was also seen at Ploesti and Schweinfurt/Regensburg. Timing was crucial to the successful outcome of these plans, but air planners failed to account for a situation in which the timing went awry. Too much weight was placed on this one pillar of timing; it could not support the pressure, and when it buckled, so did the entire edifice.

Certain factors become clear when studying the issue of time in war. The conquest of time can produce other qualities and situations that can turn the tide. The first of these is *speed*. Theorists and commanders have realized since antiquity that moving quickly is a major goal to be achieved both approaching the battlefield and then during the battle itself. Speed often grants *surprise*, which contains both physical and psychological elements—most theorists would argue that the psychological impact is more powerful. The shock of arriving in force when and where an enemy does not expect it can often cause panic, as was the case for the arrival of the Prussian army of Frederick the Great at Leuthen in 1757, the arrival of Admiral Horatio Nelson's fleet at Aboukir Bay in 1798, or the drive through the Ardennes by German blitzkrieg forces in 1940. In addition, time is crucial in the collection and dissemination of accurate intelligence. Indeed, most commanders would argue that the value of intelligence is directly proportional to the speed of that gathering and dissemination.

The conquest of time also grants *flexibility* and *mobility*. It should not be surprising that the great captains of

history—Alexander, Hannibal, Genghis Khan, Frederick the Great, Napoleon, Nelson, Wellington, Lee, and Patton, among others—were known for their rapidity of movement and ability to adjust quickly to events. With the arrival of the airplane, this ability to move quickly and conquer time was multiplied by an order of magnitude or more. Even in World War I, aircraft struck targets hundreds of miles behind enemy lines, with several tons of bombs, while traveling 20 times faster than infantry on foot. It has been a facet of modern air warfare that this ability to strike deeply and quickly allows parallel warfare—speed and precision-guided munitions permit a multitude of enemy targets to be struck throughout a theater in a remarkably short period of time. More targets were struck across Iraq from the air in the first 24 hours of Operation *Desert Storm* in 1991 (152 separate targets) than the Eighth Air Force had been able to hit in its first year of operation over Europe in 1942 and 1943.²⁵ It is not unreasonable to suggest that Iraq was defeated on the first day of war; Saddam Hussein was cut off from his forces and knocked off balance to such an extent that he was never able to recover. The speed of the coalition attack conquered time and made it virtually impossible for Saddam to avoid defeat.

Time can in some instances substitute for *mass*. Although a principle of war, the tremendous speed and accuracy of modern air weapons can now assure density—mass precision. As noted, such mass-precision attacks in a short period of time allow simultaneity—and those attacks generally neutralize targets due to precision-guided munition accuracy. This also means the lowering of risk—fewer aircraft, operating in a danger zone for a greatly reduced period of time, means lower casualties. Since *Desert Storm* in 1991, the United States has sustained just a handful of casualties in air operations despite hundreds of thousands of combat sorties flown in various theaters around the world.

As noted in the introduction to this article, the telescoping of time can provide a great psychological impact. Because of the speed with which airpower

can operate, psychological effect has always been touted by Airmen. Air Marshal Hugh Trenchard, regarded as the Father of the Royal Air Force, stated that the psychological impact was 20 times greater than the physical effect of bombing.²⁶ Although he was exaggerating, Trenchard was not alone in his belief regarding these psychological repercussions.

It was one of the great irritants of the Vietnam War to Airmen that civilian thinkers in Washington devised a strategy of “gradual escalation” against North Vietnam. This policy was intended to serve as a carrot and a stick: the United States would bomb some valuable targets in the North with the clear implication that if enemy leaders would not modify their behavior and cease fomenting war in the South, the bombing would increase in volume and include higher value targets. If, however, the North did ease off, then carrots—favorable political or economic terms—would be forthcoming. In the words of one National Security Council document from December 1964:

Such a program would consist principally of progressively more serious air strikes, of a weight and tempo adjusted to the situation as it develops (possibly running from two to six months) and of appropriate U.S. deployments to handle any contingency. Targets in the DRV [Democratic Republic of Vietnam] would start with infiltration targets south of the 19th parallel and work up to targets north of that point. This could eventually lead to such measures as air strikes on all major military-related targets; aerial mining of DRV ports, and a U.S. naval blockade of the DRV. The whole sequence of military actions would be designed to give the impression of a steady, deliberate approach, and to give the U.S. the option at any time (subject to enemy reaction) to proceed or not, to escalate or not, and to quicken the pace or not. Concurrently, the U.S. would be alert to any sign of yielding by Hanoi, and would be prepared to explore negotiated solutions that attain U.S. objectives in an acceptable manner.²⁷

This strategy of gradual escalation was deeply resented by the Airmen assigned to implement it because it robbed airpower of one of its greatest weapons—the psychological impact of dominating time. Worse, the strategy did not work. The stick used in gradually escalating air attacks was never hard enough or swift enough to prevent the North Vietnamese from stealing the carrots.

Time has been a key factor in war since antiquity, and commanders and military thinkers have constantly tried to harness it for their advantage. To do so would grant them speed, secrecy, surprise, and shock. Great commanders were those most adept at conquering time. This quest took on new vigor with the invention of the airplane in the first decade of the 20th century. The conquest of time, as well as the medium in which aircraft operate, was recognized as revolutionary within the first decade of manned flight. A century later, that revolution is even more apparent as speed, accuracy, range, and secrecy continue to increase. Joint commanders must recognize this capability and factor it into their military plans. JFQ

Notes

¹ Sun Tzu, *The Art of War*, trans. Samuel B. Griffith (London: Oxford University Press, 1963), 106, 134.

² Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), 198.

³ For excellent discussions of the physical, religious, and psychological dimensions of time, see Paul Davis, *About Time: Einstein's Unfinished Revolution* (New York: Simon & Schuster, 1995); and Colin Wilson, ed., *The Book of Time* (North Pomfret, VT: Westbridge, 1980).

⁴ For the best examination of John Boyd's theories—and my simple overview does not do it justice—see Frans P.B. Osinga, “The Enemy as a Complex Adaptive System: John Boyd and Airpower in the Postmodern Era,” in *Airpower Reborn: The Strategic Concepts of John Warden and John Boyd*, ed. John A. Olsen (Annapolis: Naval Institute Press, 2015).

⁵ One author, an infantryman, also uses more scientific terms, such as frequency and amplitude, to describe the effects of time on the battlefield. See Robert R. Leonhard, *Fighting by Minutes: Time and the Art of War* (Westport,

CT: Praeger, 1994), chapter 5.

⁶ Brian Caven, *The Punic Wars* (London: Weidenfeld & Nicolson, 1980), 273–291.

⁷ Vincent C. Jones, *Manhattan: The Army and the Atomic Bomb* (Washington, DC: U.S. Army Center of Military History, 1985), 534–550.

⁸ Count Philippe-Paul de Ségur, *Napoleon's Russian Campaign* (Boston: Houghton Mifflin, 1958), 70. For the battle itself, see David Chandler, *The Campaigns of Napoleon* (New York: Macmillan, 1966), 790–810.

⁹ Edwin B. Coddington, *The Gettysburg Campaign: A Study in Command* (New York: Simon & Schuster, 1997), 384. Debates over who was at fault for the delays and lack of coordination on day 2 have raged for well over a century. Longstreet usually gets the blame, but others argue Lee gave confusing and contradictory orders and failed to exercise the requisite control over his subordinates. Others blame the guides who failed to scout an appropriate route that would allow Longstreet's corps to move into place without being seen by the Union spotters on the Round Tops. In any event, the timing was seriously compromised and defeat was the result. See Noah Andre Trudeau, *Gettysburg: A Testing of Courage* (New York: HarperCollins, 2002), 282–371.

¹⁰ For the plan, see Gerhard Ritter, *The Schlieffen Plan* (New York: Praeger, 1958). For the first two decades after World War I, most believed the plan was a brilliant concept that was incompetently carried out by von Moltke and his generals. When the plan itself was finally discovered and studied after World War II, that opinion changed. Most historians have since decided there were not enough German troops to carry it out, it was politically foolish, and the plan was so dependent on precise timing of an extremely complex and difficult maneuver as to be impossible of execution.

¹¹ For an overview, see Martin Gilbert, *The First World War: A Complete History* (New York: Henry Holt, 1994), 29–30, 72.

¹² James F. Schnabel, *Policy and Direction: The First Year* (Washington, DC: U.S. Army, Office of the Chief of Military History, 1972), 144.

¹³ *Ibid.*, chapters 8 and 9. For an excellent account of MacArthur and his role in Operation *Chromite*, see D. Clayton James, *The Years of MacArthur: Triumph and Disaster 1945–1964*, vol. 3 (Boston: Houghton Mifflin, 1985), 464–485.

¹⁴ Schnabel, 173–177.

¹⁵ For an excellent discussion, see Stephen L. McFarland, *America's Pursuit of Precision Bombing, 1918–1945* (Washington, DC: Smithsonian, 1995), chapter 5.

¹⁶ For the strategic context of this mission, see Wesley F. Craven and James L. Cate, *The Army Air Forces in World War II*, 7 vols. (Chicago: University of Chicago Press, 1948–1958), II, 477–483. For a more detailed account, see Donald L. Miller, *Masters of the*

Air: America's Bomber Boys Who Fought the Air War Against Nazi Germany (New York: Simon & Schuster, 2006), 187–192.

¹⁷ Miller, 191.

¹⁸ For the strategic context, see Craven and Cate, II, 681–687; and for a more detailed account, see Miller, 192–205.

¹⁹ Miller, 193.

²⁰ For the beginning of Operation *Rolling Thunder*, see Jacob Van Staaveren, *Gradual Failure: The Air War over North Vietnam, 1965–1966* (Washington, DC: Air Force History and Museums Program, 2002).

²¹ For an overview of Operation *Bolo*, see Wayne Thompson, *To Hanoi and Back: The USAF and North Vietnam, 1966–1973* (Washington, DC: Air Force History and Museums Program, 2000), 52–55.

²² Olds had eight flights of four aircraft each at Ubon. There would be three waves: the flights would arrive on scene in 5-minute intervals with 10 minutes between waves. This would ensure there were U.S. fighters on scene for the entire fuel duration of any MiGs that came up.

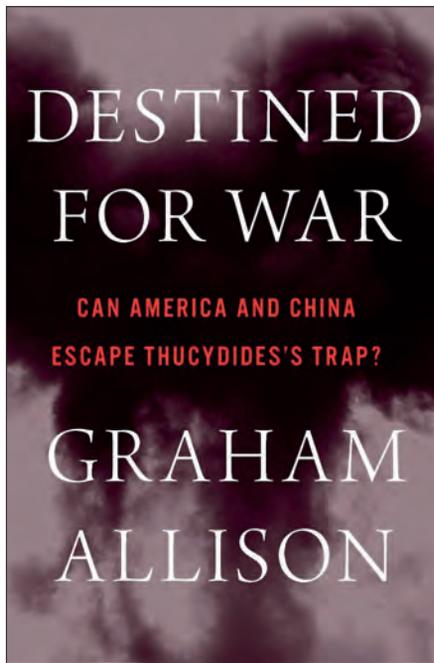
²³ For an excellent and detailed account, see Robin Olds, with Christina Olds and Ed Rasimus, *Fighter Pilot* (New York: St. Martin's, 2010), 271–282.

²⁴ Leonhard, xxi.

²⁵ David A. Deptula, *Effects-Based Operations: Change in the Nature of Warfare* (Arlington, VA: Aerospace Education Foundation, 2001), 2.

²⁶ Hugh M. Trenchard, “Bombing Germany: General Trenchard's Report of Operations of British Airmen against German Cities,” *New York Times Current History* 10, April 1919, 152.

²⁷ Department of State, *Foreign Relations of the United States, 1964–1968, Vol. I: Vietnam, 1964* (Washington, DC: Government Printing Office, 1992), 970.



Destined for War: Can America and China Escape Thucydides's Trap?

By Graham Allison

Houghton Mifflin Harcourt, 2017

384 pp. \$28.00

ISBN: 978-0544935273

Reviewed by James R. Cricks

Harvard sage Graham Allison has chosen to focus his considerable foreign policy expertise on the preeminent question of our age: how can we avoid a future war between its two most powerful nations? This book is a historically driven analysis of a topic he previously discussed in a prominent 2015 *Atlantic* article on the “Thucydides Trap.” In the classic work on the Peloponnesian War, Thucydides described the case of a disastrous conflict between a rising Athens and an established Sparta that brought Greek preeminence to a close. As a new U.S. administration grapples with a similar relationship, Allison provides key insights on the nature of the current problem while offering clues on how it can be successfully managed. He asserts a U.S.-China war is not inevitable, but conflict will continue to intensify as

rising Chinese strength causes great concern for the United States and its allies.

Destined for War begins with a summary of the present operational environment in which China has surpassed the United States economically, as measured by several key indicators. “Grand Master” Lee Kuan Yew, former leader of Singapore, provides critical comments on China’s “true nature” and its potential as the “biggest player in the history of the world.” The second part of the book provides a perspective of U.S.-China relations using a 500-year survey of superpower relationships. Of the 16 cases (16th-century Spain-Portugal to the current German rise), no less than 12 of them ended in war. Allison ominously offers the case of the rivalry between pre-World War I Germany and Great Britain as the closest analogue to our current global situation. Finally, he assesses that the United States must make radical changes in its attitudes and actions if it is not to follow the same path. His prescription involves a better understanding of the clash of civilizations that his colleague Samuel Huntington earlier outlined in his own seminal work. Importantly, Allison calls for deeper reflection before we “sleepwalk” into another 1914-like catastrophe.

It is hard, but necessary, to critically evaluate Allison’s argument in spite of his stellar reputation since John F. Kennedy’s Cuban Missile Crisis. His impressive listing of colleagues can also create another type of trap for readers easily awed by Western academic credentials. Could this book be weakened by some intellectual arrogance as the author assembled evidence from elite circles? He does not acknowledge any major knowledge gaps that should be focused on during a U.S. “pause for reflection.” Xi Jinping and the current Chinese Communist Party leadership are significant players, but so are Jack Ma of corporate giant Alibaba and other groups outside of Beijing. In the last century, the United States focused on Chinese nationalist leader Chiang Kai-shek and missed other underlying currents. Academic modesty may be in order as we struggle to better understand

China and Eastern thinking. Richard E. Nisbett’s *Geography of Thought* (Free Press, 2003) could help military strategists with key cultural insights on the differences between Western Aristotelian and Eastern Confucian-based thought patterns. Allison does state that civilizational differences “are growing more, not less, significant as sources of conflict.”

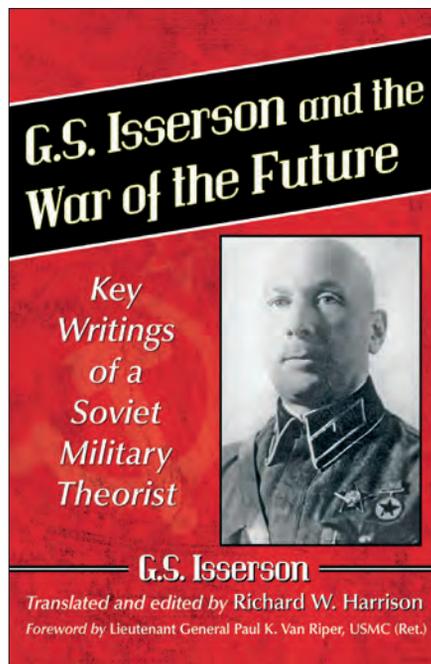
Allison lays out several strategic options the United States should consider after its reflection. He cautions that accommodation is not the same as appeasement and should be rationally considered. The withdrawal of U.S. troops from South Korea may be part of an exchange for Chinese denuclearization of the North. With the 1963 U.S.-Soviet Union confrontation in mind, he realizes any miscalculation producing an all-out nuclear war from Asia would be madness. His next option would be to undermine the Chinese Communist leadership, which has a fragile hold on its 1.4 billion fellow citizens. The core Communist ideology is not compatible with increasing demands for freedom, especially in areas where non-Han Chinese populations live. This confrontational U.S. option is problematic because many Chinese are sensitive to previous Western manipulation during a “century of humiliation.”

Allison’s third option is to negotiate a long peace similar to our arrangements with the former Soviet Union during the time of détente. The United States could link an end to its human rights litany to South China Sea concessions by the Chinese. Although there were advantages to this strategy when we faced the Soviets, the Chinese have a patience that they can use to their advantage against the numerous U.S. administrations that Xi could face. His final option is to redefine our relationship with China and work together on such “mega-threats” such as climate change or global terrorism. Presidents Xi and Barack Obama began down this path with the 2016 Paris Agreement but continued cooperation does not appear likely as the United States is now skeptical of many global efforts. The recent “pivot” to the Asia-Pacific region was underwhelming in execution, and few American strategy

documents are even read by senior members of the U.S. national security team. Allison notes with hope that the Chinese leader is not irrationally nationalistic, allowing his daughter to attend Harvard and reap the benefits of international cooperation among elites. Allison's main caution is that our strategic dilemma requires some major bilateral adjustment to avoid an impending catastrophe.

This is an important book that strongly contributes to the body of international relations work. Strategists and military officers should read it carefully to better understand the high stakes involved in this U.S.-China rivalry. George C. Marshall struggled with the Chinese relationship himself, especially as Secretary of Defense, even after personally knowing Mao Zedong and other leaders in China. Marshall marveled at the complexity of the Chinese problem in 1950 and the challenge, including North Korea, has not gotten any simpler today. We no longer have Marshall or Lee Kuan Yew to provide advice, so we are obligated to increase our own knowledge and empathy. Reading *Destined for War* is one way to fulfill that obligation. JFQ

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G.S. Isserson and the War of the Future: Key Writings of a Soviet Military Theorist

Translated and Edited by Richard W. Harrison
McFarland, 2016
332 pp. \$45.00
ISBN: 978-1476662367

Reviewed by Ofer Fridman

On December 8, 1594, William Louis of Nassau, one of the commanders of the Dutch army, sent a letter to his cousin, Maurice of Nassau, in which he suggested a new way to deploy musketeers on the battlefield that significantly increased their rate of fire. He argued that six rotating ranks of musketeers could produce a continuous hail of fire, keeping the enemy at bay. This “volley” technique (known as the “European Countermarch” today) soon became the standard way of force deployment in European armies. It was part of the emerging military revolution that changed not only the ways to conduct wars but also the geopolitical balance in Europe and the general course of history.¹ In 1532, 62 years before this pivotal work of the Counts of Nassau,

another work of military significance was published—*The Prince* by Niccolo Machiavelli. While this book did not deal with military deployment per se, its significance as one of the fundamental works on political-military relations has been widely acknowledged through the centuries.

On the one hand, both these works deserve our recognition as important keystones in military history. On the other, their contributions to the phenomenon of war were entirely different. While the first had an instrumental and practical nature intended to solve problems in the context of 16th-century military technology and tactics, the second shaped the philosophical understanding of *why* states fight and *how* they should do it. Therefore, it is not surprising that while the military genius of the Counts of Nassau is remembered only by a small circle of military historians, Machiavelli maintains his position as one of the founders of modern political-military thought.

Reading Dr. Richard Harrison's translation *G.S. Isserson and the War of the Future* calls to mind the work of the Counts of Nassau more than that of Machiavelli. On the one hand, Isserson truly deserves his place in the pantheon of all great military thinkers, as one of the most prominent developers and promoters of the concept of deep operations that proved itself so profoundly on the battlefields of World War II. Without doubt, his concept of deep operations was the European Countermarch of the 20th century that changed the way of war. On the other, Isserson is too practical and instrumental in solving the technological and tactical problems of his time, focusing on functional improvement of force deployment, rather than on the broader phenomenon of war or its evolution in the 20th century.

Reading through Harrison's selection of six of Isserson's works that comprises the book, it is difficult to see their relevance today or for the future of war. Thus, I do not share the enthusiasm of retired Lieutenant General Paul K. Van Riper's foreword, which states that Isserson still has “much to offer for those

involved in force development, that is, writing military concepts and doctrine and designing future organizations” (p. 5). Indeed, it is easy to understand why he finds Isserson’s claim—“the determination of the tasks of military operations corresponding to the political goals of war” (p. 4)—attractive, as at the time when Isserson made this claim, the U.S. Army’s textbook on strategy stated that “politics and strategy are radically and fundamentally things apart.”² However, Isserson’s work served as a practical solution for the limitations created by the technology and tactics of the early 20th century, without any attempt to reduce the significance of his work, but it seems that its relevance to military problems of the 21st century is similar to the relevance of Counts of Nassau and their volley technique to the battlefields of World War I.

Moreover, the suggestion that reading Isserson contributes to the understanding of the contemporary Russian military approach is rather contestable. Analyzing the works of contemporary Russian strategists on the phenomenon of war, such as Aleksandr Vladimirov, Andrey Kokoshin, Vasilii Mikriukov, and others, is invaluable, but it is difficult to find Isserson’s heritage in them. In other words, those American military scholars who focus on Isserson’s work, which is steeped in the context of preparations for World War II, do it much more than their Russian counterparts. Maybe Dr. T.X. Hammes was right after all, and the U.S. military is still struggling to move away from its embrace of the third generation of warfare with its massive force deployments, armored maneuvers, and deep operations.³ Isserson’s manuals, so crucial for the effective deployment of massive forces in World War II, seem to shed little light on Russia’s military decisions in the second decade of the 21st century.

Overall skillfully translated and edited, this volume may deserve “a place in any military professional’s library,” as General Van Riper writes. However, it should be placed on the same shelf with Jacob de Gheyn’s *Arms Drill with Arquebus, Musket and Pike*, written in 1607, for its historical significance rather

than contemporary relevance. Russian military thought has its own Machiavellis, Clausewitzs, and Jominis, who have been shaping the Russian way of war for the last two centuries—Genrikh Leer, Aleksandr Mikhnevich, Aleksandr Svechin, Evgeny Messner, and Makhmut Gareev, just to name a few. Despite their enormous potential to improve the American military understanding of the Russian traditional approach to war, these works, unfortunately, have been generally neglected by American military thinking. Van Riper is right about of the gaps that American military officers have in their knowledge of the Russian military (p. 2), but Isserson’s work is not the best one to start filling these gaps. JFQ

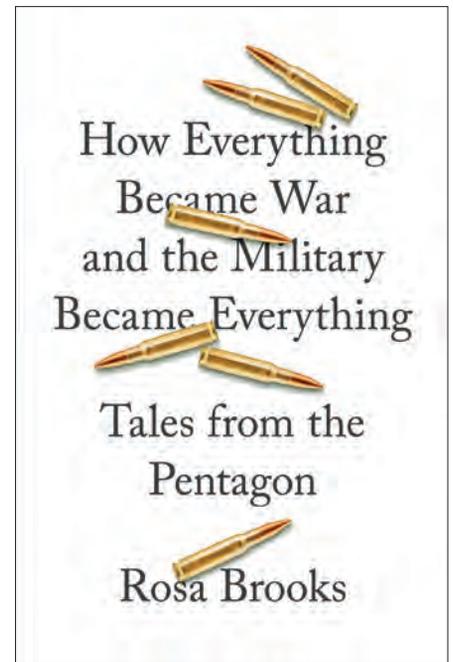
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Notes

¹ Geoffrey Parker, *The Military Revolution: Military Innovation and the Rise of the West 1500–1800*, 2nd ed. (New York: Cambridge University Press, 2012), 18–24.

² *Principles of Strategy for an Independent Corps or Army in a Theater of Operations* (Fort Leavenworth, KS: Command and General Staff School Press, 1936), 19.

³ T.X. Hammes, *The Sling and the Stone: On War in the 21st Century* (St. Paul, MN: Zenith Press, 2004).



How Everything Became War and the Military Became Everything: Tales from the Pentagon

By Rosa Brooks
Simon & Schuster, 2016
448 pp. \$29.95
ISBN: 978-1476777863

Reviewed by Tammy S. Schultz

The reader of *How Everything Became War and the Military Became Everything: Tales from the Pentagon* will cheer, groan, and have core beliefs reinforced and challenged—everything a good book should do. Rosa Brooks argues that warfare is changing, the military is taking on way too much, and U.S. national security is in peril as a result. The book is especially timely given calls for increased military spending while simultaneously drastically cutting State Department and foreign aid funding.

Brooks, currently a professor at Georgetown Law School and a Senior Fellow at New America, served in the Barack Obama administration. She also traversed the worlds of the State Department and nongovernmental organizations (NGOs). A well-respected

commentator on national security, Brooks is uniquely positioned to transform what could be another tedious national security book into a page turner given her journalism background and other experience.

Part memoir, part sounding an alarm on the military's ubiquitous role in national security, Brooks deftly weaves together research on warfare trends and Pentagon "there I was" policy fights. She organizes the book into three sections: the new American way of war, how we got here, and counting the cost.

The first section covers her views on the vast changes in the operational environment that have led to a new American way of war. Brooks covers a lot of ground, but a few themes stand out. When she discusses the "individualization of war," I recalled a conversation with a Marine Corps-level intelligence officer more than 10 years ago. He commented that other than historic bigwigs such as Adolf Hitler and the like, he could not recall an entire Corps' intelligence shop focused on finding specific individuals, as was the case in Operation *Iraqi Freedom*. Brooks also discusses technology, such as the ubiquity of drones, international law not keeping up with current challenges, and ambiguity over traditional roles and missions.

With the next section, Brooks jumps to history. Here the author employs more of her legal and NGO background to show how the briar patch containing national security thorns catching us today was planted long ago. Brooks takes on such subjects as warriors (and societies) cleansing themselves before and after war; the laws of war (whatever "war" is), which are meant to put war "in a box"; and state sovereignty issues, from wars in the state-making enterprise to intervention in failing states.

Brooks finally tackles the costs for these skewed lines in the third section. Even if all U.S. civilian and military leaders are good people, which Brooks believes, she does not trust the rest of the world, which makes the precedents we are setting troubling indeed. Should the United States follow international law in a fight against a nonstate actor,

or just some parts of international law? Should new law be written, or does that aggrandize these scourges upon the world? Should drone strikes continue to violate the sovereignty of states with whom we supposedly are not at war, or take out U.S. citizens? What should be the threshold of proof for a state to act preemptively? How can U.S. civilian and military leaders learn to trust and respect each other enough to enter into these difficult conversations without immediately defaulting to entrenched, zero-sum positions? These are all important questions that Washington needs to think much deeper about if we are to remain not only a global power, but also a unique one.

Brooks is a fantastic storyteller. Some may believe that she jumps from topic to topic too quickly. For instance, she goes from Special Forces to contractors to overclassifying documents in a short span. But that critique entirely misses Brooks's artistry. I believe she uses that style to symbolize one of the book's main points regarding our haphazard approach. The military becomes the default answer to any national security problem absent other policies and civilian capabilities. The President, Congress, and the American people would prefer to fund the troops instead of civilian instruments of power, even though a mindset change followed by true action could actually save Servicemembers' lives.

I depart from Brooks on one of her main arguments—that war itself is changing. First, Carl von Clausewitz's most famous dictum states that "war is policy by other means." I once asked Dr. Eliot Cohen of the School of Advanced International Studies when Clausewitzian principles would no longer apply to warfare: War would have to cease to be about policy, he stated. I agree, and believe we have not breached that fundamental characteristic.

This leads to the second reason I am not confident that war itself is changing. Brooks's argument centers on warfare's ways (policies, doctrine, concepts, and the like) and means (capabilities, resources), not on the ends (goals) themselves. So while she makes a compelling case that we have yet to truly develop

more appropriate ways and means for many issues, from drones to cyber warfare, we struggled to reconcile means and ways with ends before. Nuclear weapons are the most profound example. We just have to have the moral courage to recognize the problem and work on better answers.

Clausewitz held that while warfare's grammar might be unique to policy, the logic is not. Brooks makes a compelling case for how war's grammar is changing, but in my opinion the policy logic still holds. That said, civilian and military leaders who disregard her book's arguments do so at their, and the nation's, peril. JFQ

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Amphibious assault ship *USS America* test-fires rolling airframe missile launcher to intercept remote-controlled drone during exercise to test ship's defense capability (U.S. Navy/Demetrius Kennon)



Robotic Swarms in Offensive Maneuver

By Jules Hurst

For many years, military scientists have contemplated the advent of swarming tactics as an evolution within maneuver warfare, and futurists have contemplated the execution of the tactics by cooperative teams of semi-autonomous drones.¹ These projections expound on strengths demonstrated by hive-minded organisms such as bees or ants, which work cooperatively to defeat larger invaders through non-hierarchical communications. Other swarm theorists reference the deadly effectiveness of the ephemeral, loose formations

of horse archers of the Asian steppe against less flexible foes.² Whatever the source of inspiration, few authors move beyond the abstract employment of robotic swarms. To fully explore swarm utility in fire and maneuver, swarms should be inserted into the tactical concepts of today—chiefly, the five forms of offensive maneuver recognized under Army doctrine.

Swarm Combatants

Much of the reluctance to begin theorizing about specific swarm tactics stems from the absence of a clear developmental path in the technology. No one knows what swarm combatants will look like or what their capabilities will be, and many prototype pathways exist.

Swarm drones could easily take on the appearance of the U.S. Navy's Low-Cost Unmanned Aerial Vehicle Swarming Technology (LOCUST),³ an inexpensive, fixed-wing platform that is individually tube-launched and autonomously joins a swarm once airborne. Alternatively, ground-based swarm combatants might resemble miniature tanks like the Estonian ADDER weaponized ground vehicle.⁴ For the purposes of this article, though, assumptions need to be made. Future swarm combatants will likely be severable into two broad categories: fire support swarms and maneuver swarms.

Fire support swarm combatants will carry one-time-use warheads that are changed modularly to deal with a variety of targets (area, point, soft-skinned, hardened, airborne, and others). These kamikaze-styled drones could be airborne or ground-based. They might be capable of independently recognizing enemy targets through image classification or need assistance from human controllers. They will likely be individually inexpensive compared to many modern weapons of war, including the precision-guided munitions they may replace. Fire support swarms probably will be initially deployed

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Scan Eagle unmanned aerial vehicle designed to provide multiple surveillance, reconnaissance data, and battlefield damage assessment missions launches from amphibious dock landing ship USS *Comstock*, February 25, 2011 (U.S. Navy/Joseph M. Buliavac)

by conventional field artillery and air assets, but in the future, semi-autonomous systems specifically designed for this purpose may take this mission from them. Something akin to a mini-mobile mortar, self-propelled howitzer, high-flying drone aircraft, or a “truck with rockets” could autonomously move forward with maneuvering elements to deploy responsive fire support swarms.

Theoretically, fire support swarm combatants will be less expensive than precision-guided munitions, capable of targeting without human intervention through object recognition and able to loiter overhead until needed by maneuver forces. Their largest advantage will be numerical. Modern air defense systems are not designed to intercept large quantities of small projectiles, and current missile systems would be overwhelmed if tasked with intercepting a fire support swarm consisting of dozens of munitions.

Maneuver swarm drones will resemble modern air forces and armies on a microscale. Miniature quadcopters armed with light machine guns might act as attack aviation platforms, and scaled-down infantry fighting vehicles will imitate modern armor and mechanized infantry. Flights of fixed-wing swarms will provide persistent autonomous air support as they

orbit the battlefield like flocks of angry birds.

Maneuver swarms will likely be more durable than their fire support counterparts and exercise greater cooperation with human combatants on the battlefield. Unlike fire support swarms, maneuver swarms will be persistent and capable of multiple uses. A maneuver swarm might resemble a microcosm of the combined arms forces that have made up militaries since the mid-20th century. They will reflect the synergistic mix of capabilities found there, but they may field air and ground assets in drastically different ratios than are common in today’s Brigade Combat Teams.

Robotic maneuver swarms lack the biggest inhibitor of human combatants—fear. This apathy to casualties would prevent them from having their maneuver restricted by enemy fires, and their ability to field large numbers of swarm combatants offers them a resilience against losing combat effectiveness unknown to human combatants. Maneuver swarms consisting largely of aerial robots would also possess the ability to compress into a space unimaginable by ground-based maneuver units because of their ability to stack vehicles in the air at different altitudes.

Finally, robotic maneuver swarms may offer the best platform to execute reconnaissance pull tactics, a subset of *Auftragstaktik* or mission-type tactics.⁵ In recon pull, commanders order units to conduct reconnaissance along the length of the enemy front to determine where to mass forces for the battle’s decisive operation and attempt penetrations or envelopments. A swarm could be particularly effective at this because of its potential to collect big data in real time. Without pause, swarm combatants could relay situation reports faster than any squad leader on a radio. Every soldier may be a sensor, but each swarm combatant will be a sensor platform with an infallible memory.⁶ A shot fired by or at a swarm combatant provides a data point that, when aggregated, could help the swarm (or human analysts and operators) determine the mass, density, and disposition of enemy forces along its front. With proper processing, this swarm data could provide commanders with a visualization of enemy activity on the battlefield in real time and improve their cognitive ability to perceive a battlefield filled with tens of thousands of robots, human beings, and vehicles.

Imagine the power of thousands of drones gathering combat data in real time and the rapidity with which weak points in the enemy line could be calculated and exploited with a robotic coup d’oeil. Then imagine how quickly these same drones could concentrate in an attack on these points. The potential for a trained swarm to observe, orient, decide, and act faster than human combatants in this scenario is frightening.⁷ When swarms face one another, the speed of the swarm’s coup d’oeil—determined by algorithmic efficiency and processing power—may decide the outcome of battles, and if robots ever become the military’s primary maneuver arm, a force’s mobile computing capabilities may be a key component in evaluating its overall combat power.

The Role of the Air Force and Naval Aviation

Air Force and Navy assets will play critical roles in the delivery, sustainment, and cyber protection of drone swarms

on the land and in the sea and air, but they will also have significant roles in fielding and controlling maneuver swarms in land armies. Fixed-wing systems offer numerous advantages over their rotary-wing counterparts in endurance, speed, and payload capacity due to efficiencies inherent in their aeronautical design. Accordingly, fixed-wing drones should make up a large portion of future maneuver and fire support swarms. Unless ceded to the Army, these armed, robotic fixed-wing platforms will be controlled by Air Force or naval aviation, necessitating that both Services further integrate their mission command of these swarms directly with land forces.

Currently, the Air Force sees maneuvering airpower as a way of adding flanks outside of horizontal battle, but the fielding of large swarms of fixed-wing drones will expand the Air Force definition to include features of Army and Marine Corps concepts of maneuver.⁸ Unlike historical aircraft, fixed-wing maneuver swarms will have the persistence to take and hold terrain, allowing air forces to execute maneuvers in combat analogous to their land force brethren. Large swarms of unmanned aircraft will be able to orbit for hours, if not days, at a time, raining munitions down on their foes like Mongol horse archers circling in front of (or above) enemy battle lines.⁹ Aircraft losses from ground fire may be high but acceptable because swarm combatants will maintain low per-unit production costs and not endanger pilots—one of the most expensive combat occupations to train.

Like modern Air Force combat controllers, the Air Force and Navy personnel who control these fixed-wing maneuver swarms will need to integrate into maneuver formations, and Air Force and naval doctrine will change to accommodate their new role in land warfare. Additionally, the required interoperability of automated systems between the automated and unmanned components of different Services will necessitate standardization and joint testing beyond that of most 20th-century weapons systems. In the scenarios in the later part of this

article, maneuver swarms function under multi-Service control.

Capability Assumptions. Autonomous swarm technology only exists in nascent stages, but to explore the use of swarms in offensive forms of maneuver, we need to make projections regarding their future capabilities.

Future swarm combatants will possess sufficient artificial intelligence to operate semi-*autonomously* after receiving initial guidance from human operators. Maneuver or fire support swarms should be able to process tasks of the following complexity without human control:

Attack all adult males within a 500-meter radius of given center point until depleted of ammunition. Return to rally point X at that time OR travel to this geographic coordinate, count all individuals possibly identified as adult males for the next four hours, relay that data in real time, then return to coordinate X OR conduct a reconnaissance in force along a pre-determined route, deviations are authorized if the route becomes impassable. Self-defense authorized if engaged.

Because of their ability to communicate with other members of the swarm while performing other tasks (for example, fighting or moving) without distraction, maneuver and fire support swarms should be able to *change formations or dispositions faster* than human combatants and exploit this advantage on the battlefield. Their ability to ignore the psychological effects of incoming fire makes this advantage even greater.

Swarm endurance will grow with time, but for now let us assume that swarm combatants possess satisfactory power to *sustain* operations independent of human support for 12 to 24 hours depending on the intensity of tasks. Charging stations, situation dependent, may be deployable to extend their endurance mid-combat.

Among the hurdles to the success of swarm technology are secure *communications*. Without intra-swarm communications, maneuver swarms would become the equivalent of a human-wave attack—deadly in scale but

incapable of massing at a decisive point with swiftness. Fire support swarms with straightforward attack missions may be less reliant on intra-swarm communications and should be less vulnerable to electronic warfare. For this article, we assume that most future swarm combatants will possess the means to communicate mid-battle, at least to the point where they will be able to intermittently communicate through burst communications or while in close proximity to each other.

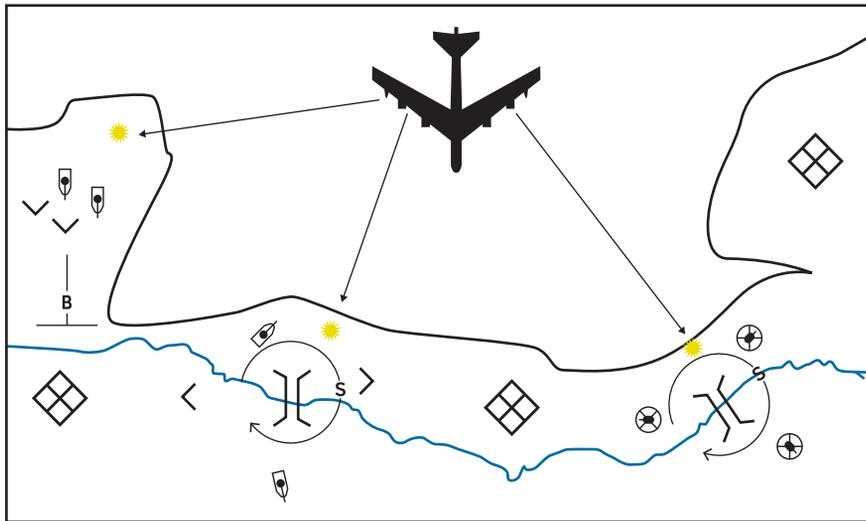
Both maneuver and fire support swarms will be vulnerable to *cyber attacks* by state and nonstate actors. The cyber components of every Service will need to make considerable effort to minimize vulnerabilities of friendly swarms and exploit those of the enemy. To decrease the likelihood of a single software or hardware vulnerability, the Armed Forces will need to avoid overstandardization of software within swarms, which will complicate system interoperability. The cyber battles that enable the kinetic use of swarm combatants will consist of system administrators and information assurance officers updating software patches before enemy forces can identify exploitation pathways in older versions, while friendly forces attempt to do the same to adversaries. Encryption and the rapid updating of cryptography will be another struggle. Communications officers across the joint force may need to update cryptographic keys multiple times a day to preserve information assurance.

Swarm combatants will be *deployable into combat* from diverse platforms, including but not limited to airdrops, artillery projectiles, cruise missiles, conventional aircraft, and other ground-based motherships.

Deploying armed swarms on the battlefield could easily pose risks to human combatants on both sides. Fratricide is a real risk, especially considering the early state of robotic object recognition. To combat this, both maneuver and fire support swarms will likely have a number of *fire support control measures* built into their programming prior to employment. These control measures may be geographic (only target enemy personnel in this geographic bounding box), temporal

Figure 1. Swarm Infiltration via Cruise Missile

A mixture of Fire Support Swarms and Aerial/Ground Maneuver Swarms are deployed through air-launched cruise missiles to seize bridges and block enemy forces from threatening a future amphibious assault on this coastline.



(do not engage targets after 1200 zulu), or beacon-based (do not attack individuals or vehicles broadcasting or carrying X; a similar concept is displayed in the movie *Screamers*, where soldiers wear a beacon to avoid being targeted by blade-wielding robots who roam the planet¹⁰). A redundant approach is likely and recommended.

Though deadly, swarm combatants will be just another tool in the joint force commander's toolbox. Conventional forces will still largely consist of human combatants and manned vehicles for at least the next two decades, but the role of robotic combatants will grow in parallel with their capabilities. One day, semi-autonomous systems may compose the majority of combatants on the battlefield. Still, *swarms will not be omnipotent*. Weapons carried by infantrymen, manned fighter aircraft, and ships will adapt to the arrival of swarm combatants just like they did to tanks, surface-to-air missiles, and submarines.

Commanders will need *variety in their swarm vehicles* to effectively accomplish their missions. Swarm combatants may vary in cost from a few hundred dollars (for disposable fire support munitions) to hundreds of thousands (for persistent combatants), all depending on their purpose and desired durability. Some

swarm vehicles will be built specifically for identified missions, and others will possess weapon and sensor modularity that allow them to adapt to multifunctional roles across different combat theaters. Most important, as semi-autonomous technology proliferates, commanders will need swarm vehicles capable of engaging traditional maneuver units and other swarms.

Forms of Offensive Maneuver

According to U.S. Army Field Manual 3-90, *Tactics*, there are five kinds of maneuver used in offensive operations: infiltration, penetration, frontal attacks, envelopments, and turning movements.¹¹ Each offers an opportunity to gain utility from robotic swarms in its own way. In the next section, we explain each of these forms of maneuver, provide historic examples of the movement, and describe a hypothetical use for a robotic swarm inside that type of maneuver.

Infiltration. A favorite of light forces and insurgents, in an infiltration, elements of the offensive force slip behind or through enemy lines to seize advantageous terrain in the enemy's rear or to sow confusion before the main assault.¹² They can also be used to interfere with the enemy's ability to conduct resupply. In 1968,

the Viet Cong famously led thousands of North Vietnamese army units into the South in small groups before launching the Tet Offensive.¹³ In another example, American and British forces boldly air-dropped behind German defensive works in Normandy to seize key bridges and intersections prior to the main assault on the morning of June 6, 1944.¹⁴

While airborne forces still offer attractive infiltration options, maneuver swarms will likely be deployable more quickly due to the speed of potential transportation options available. Today, Tomahawk land attack missiles can precisely deploy 166 submunitions from a range of over 1,000 kilometers, traveling at a speed of 550 miles per hour.¹⁵ Envision a flotilla of U.S. destroyers launching salvos of these same missiles carrying dozens of maneuver or fire support swarm combatants to seize key terrain prior to an amphibious, airborne, or air assault. These same capabilities could be used to quickly surprise an enemy force mid-battle by suddenly creating a hostile force in the enemy rear. And unlike airborne infiltration or forcible entry operations, a swarm transported via sub- or supersonic missile would lack the observable indicators of a large airborne operation—creation of an air corridor, massing of transportation aircraft—and would reduce the risk to brigades, regiments, or divisions of human combatants.

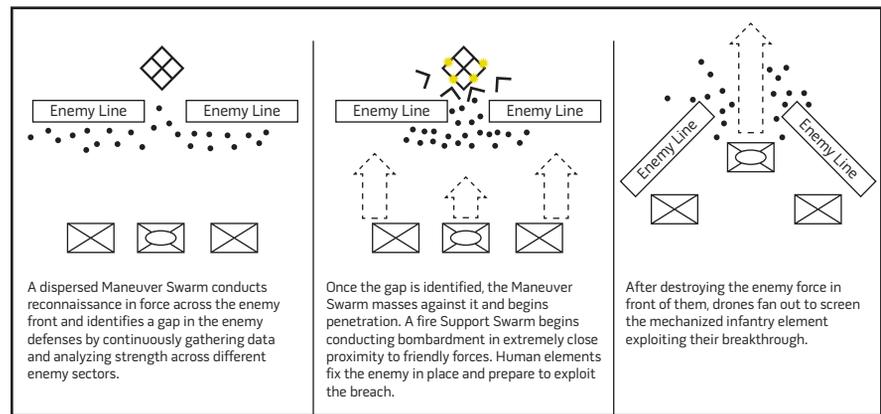
That being said, swarm infiltrations would likely need human support to achieve any kind of endurance on the ground. Small numbers of human paratroopers might accompany swarms into combat as controllers, maintainers, and installers of charging stations. To hold terrain for any length of time, maneuver and fire support swarms would need a means of refueling behind enemy lines, potentially through air-dropped solar power stations, petroleum generators, or precharged batteries. Swarms would also be unable to handle more complex tasks, such as the neutralization of explosively rigged bridges or the clearing of obstacles; after seizing objectives in Normandy, U.S. and British paratroopers often had to strip charges from infrastructure designed to deny invading Allied forces its use.

Penetration. Penetration attacks are offensive maneuvers that utilize attacks along a narrow front to pierce enemy lines and defensive systems. Once penetration is achieved, forces can either drive forward to an objective behind enemy lines or attack the undefended flanks created by the division of enemy defenses. Penetration movements are often used when flanks are unassailable or well defended or when commanders lack the time to attempt other maneuvers.¹⁶ Penetration attacks may also be launched to take advantage of a prominent weakness in enemy defenses. Armies have used penetration tactics since the dawn of warfare. Germanic warriors employed the boar's head formation to pierce enemy shield walls during the Dark Ages, and medieval knights brought the maneuver into the Middle Ages.¹⁷ In a more modern example, British Field Marshal Bernard Montgomery successfully used an armored penetrating attack to win an Allied victory at the Second Battle of Alamein in World War II.¹⁸

Successful penetration attacks often use extensive indirect fire to weaken enemy defenses or to pin enemy elements in place to prevent them from assisting the section of the enemy line targeted for penetration. Prior to the Old Guard's failed penetrating attack at Waterloo, Napoleon massed his artillery to weaken the British defenses, but the use of a reverse-slope defense and the arrival of the Prussian army prevented the maneuver's success.¹⁹

In a penetration attack using swarms, maneuver and fire support swarms could work in unison to identify and exploit a weakened section of enemy defenses. Using the robotic coup d'oeil described, maneuver swarms could deploy along the length of the enemy front as skirmishers and gather data on the composition and disposition of enemy forces they encounter. Far behind the frontline, a cluster computer, a series of them, or the computing power of the swarm itself could aggregate the swarm's observations and identify enemy weakness by examining how many swarm skirmishers were lost in each sector, how fast swarm combatants were expending ammunition, and other observables. Once the weakest sector of

Figure 2. Swarm Penetration



Source: U.S. Army Field Manual (FM) 3-90, *Tactics* (Washington, DC: Headquarters Department of the Army, July 2001).

the enemy line was identified, maneuver swarms would silently consolidate and mass against it. As they began their assault, a fire support swarm could further degrade defenses in the area, taking the place of an artillery bombardment, and permit a rolling barrage of precision indirect fire support with previously inconceivable speed and proximity to advancing forces—robots do not fear fratricide. Once an initial penetration is achieved, human mechanized forces could exploit the breakthrough and drive the attack onward toward objectives in the enemy's rear or exploit the newly created disruption in enemy defenses.

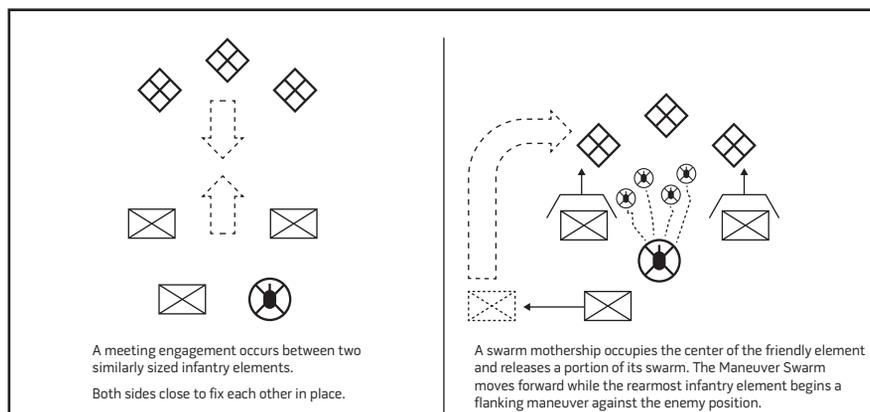
Frontal Attack. Likely used since combat took on a modicum of organization, frontal attacks are among the oldest forms of maneuver. Commanders use frontal attacks when they possess overwhelming combat power relative to the enemy to fix hostile forces in place, to destroy a breaking enemy, or to conduct a reconnaissance in force.²⁰ At the Battle of Bunker Hill, for instance, British forces sustained over 1,000 casualties conducting a series of frontal attacks against fortified colonial militiamen defending the hill outside of Boston.²¹ Many a commander has planned extravagant maneuvers prior to battle, only for a souring situation to force him into a frontal battle of attrition with his foes.

The strength of a robotic swarm lies in its ability to communicate and move

faster than human combatants in similar situations, allowing it to surreptitiously overwhelm opponents by massing at an unexpected point. Frontal assaults, depending on the complexity of terrain and the swarm deployment technology used, can make poor use of these attributes. But, as described, the ability of swarm combatants to gather and simultaneously transmit information to the joint force commander will make them highly useful as scouts and as fixing forces. Because commanders will not be as concerned with swarm casualties, they will eagerly commit them to these tasks. And because swarms lack fear and cannot be psychologically pinned down, they will execute them with unrivaled quickness and commitment.

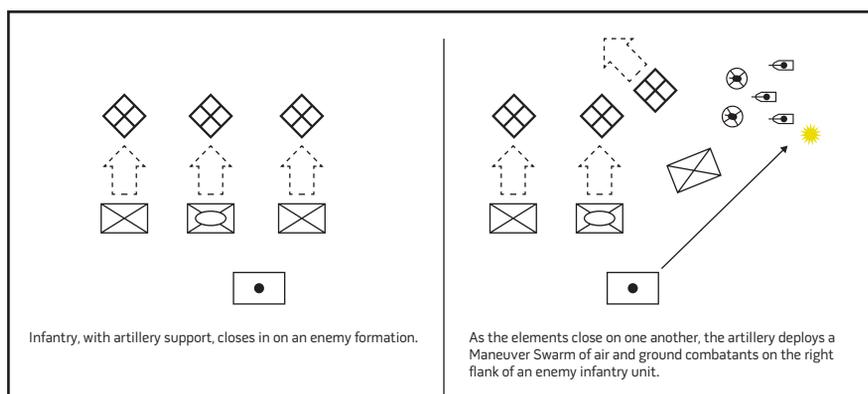
Consider this scenario: Two light infantry forces of equal size stumble upon one another in a meeting engagement. One side deploys several dozen maneuver swarm combatants from a mothership vehicle and pushes them forward in a frontal assault to contain the enemy force and permit human elements to maneuver. These swarm combatants may all be destroyed, but if they give the light infantry force the opportunity to maneuver on a similar-sized force with less risk, they have served their role. Maneuver and fire support swarms will provide commanders with the option to trade robot lives for space and time and will encourage aggressive tactics that might give commanders ordering human soldiers pause.

Figure 3. Frontal Attack to Fix in Place



Source: FM 3-90, *Tactics*.

Figure 4. Maneuver Swarm Conducts Envelopment



Source: FM 3-90, *Tactics*.

Envelopment. Envelopments send the attacking force around prominent enemy defenses to seize objectives in the enemy rear or to attack an assailable flank. They come in several forms: single envelopments, double envelopments, encirclements, and vertical envelopments. All forms avoid the enemy's front, where he possesses the greatest ability to place fires.²² The classic example of a successful double envelopment and ultimately, an encirclement, is Hannibal's victory over Roman legions at the Battle of Cannae in 216 BCE.²³ The ultimate American example is General Robert E. Lee's sweeping envelopment of General Joseph Hooker's flank at the Battle of Chancellorsville, a daring tactical maneuver that secured the legend of Stonewall Jackson and Lee in the American military consciousness.²⁴

At their core, successful envelopments require three things: a mobility advantage over an adversary, an informational advantage (the location of an assailable flank must be identified), and strong communications between the enveloping and fixing force. Robotic swarms may provide joint force commanders an edge in all three. As described in the infiltration section, maneuver and fire support swarms will be deployable at near-supersonic speeds from hundreds of miles away. If tactical intelligence, surveillance, and reconnaissance assets could effectively identify the end of an enemy's flank, a commander could request the expedited deployment of swarm combatants on that flank within minutes from cruise missiles or airdrops, granting tremendous tactical surprise. In addition to their deployment advantage, swarm combatants

could again make use of their ability to gather large amounts of data to conduct reconnaissance and send back data that aid human analysts in determining where the enemy flank begins and what, if any, forces are protecting it. Even more frightening, maneuver swarms could be easily deployed by projectile to effect a vertical envelopment of a retreating enemy force and disrupt it sufficiently to allow the pursuing army to destroy it.

Turning Movement. In a turning movement, the offensive force avoids the enemy's principal defenses and seizes objectives behind the enemy lines with the goal of forcing the enemy to respond by displacing from its current position in whole or in part. Turning movements are often used to force enemy units off advantageous terrain through the seizure of populated areas or supply lines critical to the enemy army.²⁵ James Longstreet famously advocated for Robert E. Lee to execute a turning movement prior to becoming decisively engaged at Gettysburg in July 1863.²⁶ Longstreet hoped to place the Confederate army between George Meade and Washington, DC, forcing the Union Army into a costly attack. Another well-known example is Douglas MacArthur's amphibious landing at Inchon, which severed North Korean lines of communication and sent the Communist forces back north.²⁷

Swarm combatants would likely best serve a ground commander as a screening force, not as the element conducting the turning movement itself. The swarm's inability to conduct self-sustainment would make it a poor choice. Without human support, maneuver swarms would not be able to sustain a hostile presence in the enemy's rear long enough to truly threaten enemy lines of communication.

Instead, maneuver and fire support swarms could be placed between the enemy body and the friendly element conducting the turning movement. The mechanized and aerial mobility of individual swarm combatants would not only allow them to cover wide swathes of terrain but also quickly consolidate to counter any enemy attempt to concentrate against the turning force as it exposes its vulnerable flank to the main enemy force.

Technology Drives Tactics

Ultimately, the technological limitations and advantages of maneuver swarms and fire support swarms will determine their uses in offensive maneuver and, more broadly, the tactics of employing them as a whole. Like all groundbreaking technologies—the tank, aircraft carrier, and submarine, among others—the effectiveness of swarm combatants will increase in accordance with maturation in the technology and warfighter comfort with its use. U.S. officers and noncommissioned officers can accelerate that comfort by beginning to postulate about the use of swarms well before they hit the battlefield. In the vein of aviation visionaries Billy Mitchell and Giulio Douhet, members of the Department of Defense must look forward 10, 20, or even 30 years to when artificial intelligence allows the deployment of swarm combatants on a regular basis. It will take years of field maneuvers to perfect the employment of swarms in combat, and the concepts formed during these exercises may be shattered during the first few hours of war. Even so, the U.S. warfighting community must adopt a venture capital mindset and accept many failures for the few novel ideas that may produce game-changing results. The forms of offensive maneuver will not change any time soon, but the type of units and their range of capabilities will soon be in flux. Welcome the swarm. JFQ

Notes

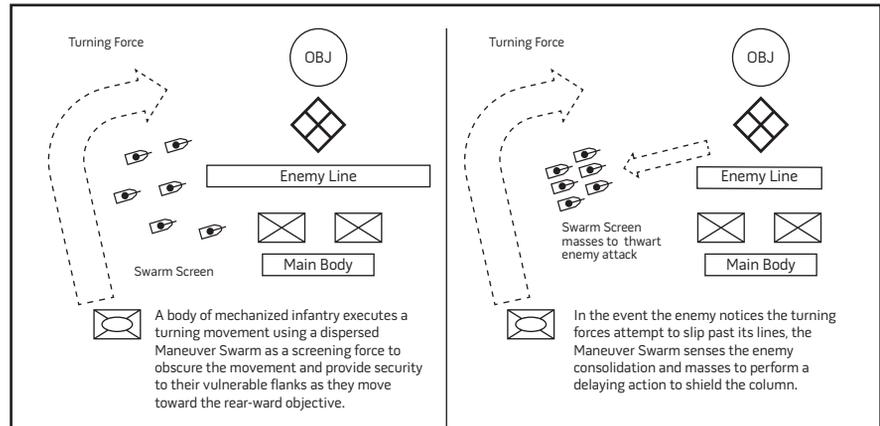
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³ Eric Limer, “Watch the Navy’s LOCUST Launcher Fire Off a Swarm of Autonomous Drones,” *Popular Mechanics*, May 24, 2016, available at <www.popularmechanics.com/military/weapons/a21008/navy-locust-launcher-test-2016/>.

⁴ “Estonian Defence Forces Successfully Tested the First Weaponized Fully Modular Unmanned Ground Vehicle,” *Defense Blog*, December 3, 2016, available at <<http://defence-blog.com/army/estonian-defence->

Figure 5. Maneuver Swarm Screens During Turning Movement



Source: FM 3-90, *Tactics*.

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⁵ Robert Leonhard, *The Art of Maneuver: Maneuver-Warfare Theory and AirLand Battle* (New York: Presidio Press, 1991), 114.

⁶ Stew Magnuson, “Army Wants to Make Every Soldier a Sensor,” *National Defense Magazine*, May 2007, available at <www.nationaldefensemagazine.org/archive/2007/May/Pages/ArmyWantSensor2650.aspx>.

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⁹ Kacey Deamer, “Two Days Aloft: ‘Vanilla’ Drone Breaks Endurance Record,” *Live Science*, January 13, 2017, available at <www.livescience.com/57506-darpa-drone-sets-endurance-world-record.html>.

¹⁰ *Screamers*, directed by Christian Duguay (Culver City, CA: Sony Pictures, 1996).

¹¹ Field Manual (FM) 3-90, *Tactics* (Washington, DC: Headquarters Department of the Army, July 1, 2001), 2-2.

¹² *Ibid.*, 3-19.

¹³ James H. Willbanks, *The Tet Offensive: A Concise History* (New York: Columbia, 2008).

¹⁴ Stephen E. Ambrose, *Band of Brothers: E Company, 506th Regiment, 101st Airborne from Normandy to Hitler’s Eagle’s Nest* (New York: Simon & Schuster, 2001).

¹⁵ “Tomahawk Cruise Missile: United States Navy Fact File,” August 14, 2014, available at <www.navy.mil/navydata/fact_display.asp?cid=2200&ctid=1300&ct=2>.

¹⁶ FM 3-90, 3-25.

¹⁷ Njord Kane, “Viking Battle Tactics: The Boar Formation,” *Spangenhelm*, June 23, 2016, available at <<http://spangenhelm.com/viking->

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¹⁸ Niall Barr, *Pendulum of War: The Three Battles of El Alamein* (New York: Overlook, 2006).

¹⁹ David Howarth, *Waterloo: A Near Run Thing* (New York: Phoenix, 2003).

²⁰ FM 3-90, 3-30.

²¹ Nathaniel Philbrick, *Bunker Hill: A City, A Siege, A Revolution* (New York: Penguin, 2014).

²² FM 3-90, 3-12.

²³ Patrick Hunt, “Battle of Cannae: Carthage-Rome,” *Encyclopedia Britannica Online*, December 23, 2014, available at <www.britannica.com/event/Battle-of-Cannae>.

²⁴ Stephen W. Sears, *Chancellorsville* (New York: Mariner Books, 1998).

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²⁶ “America’s Civil War: Robert E. Lee and James Longstreet at Odds at Gettysburg,” *HistoryNet*, June 12, 2006, available at <www.historynet.com/americas-civil-war-rob-ert-lee-and-james-longstreet-at-odds-at-gettysburg.htm>.

²⁷ David Halberstam, *The Coldest Winter: America and the Korean War* (New York: Hyperion, 2008).



After continuous rains caused serious flooding in Haiti's north, government agencies supported by UN mission in Haiti and World Food Program responded with evacuations, temporary shelters, and food and supplies distributions, November 11, 2014 (Courtesy UN/Logan Abassi)

The U.S. Government's Approach to Food Security

Focus on Campaign Activities

By George E. Katsos

Chairman of the Joint Chiefs of Staff General Joseph F. Dunford, Jr., stresses the importance of effective cooperation with nonmilitary organizations to promote a common operational framework and allocate

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critical information and resources. Per his direction, the joint force continues to inquire about and examine the nuances between organizational work-force cultures and methodologies. One area where military and nonmilitary workforce approaches differ is security. This article focuses on an aspect of security known in international circles and endorsed by the United Nations (UN) as *human security*.¹ Threats to human security can be categorized in

seven dimensions, one of which is food security.² Complementing an initial installment on health security also published in *Joint Force Quarterly*, this article addresses the U.S. Government's approach to food security with a focus on combatant command campaign activities.³

Food security is inextricably linked to national, regional, and international stability.⁴ It involves food availability and access based on purchase, agricultural

practices, and systems of distribution.⁵ Nations and international organizations such as the United States and the UN continue to develop policies and deploy workforces to prepare for, respond to, and even prevent threats to food security. As domestic approaches mature and international demands for food security expand, U.S. military involvement in support of increased national food security objectives should be expected. Although food security is not an inherent Department of Defense (DOD) function for civilian populations, it is an objective of U.S. Government strategic competition.⁶ Without food security, political, economic, or social stability can deteriorate, leading to increased requests for U.S. military assistance. Additionally, U.S. Government workforce deployments that counter nontraditional threats (such as those to any dimension of human security) can easily increase costs beyond those of conventional war. While trends of conflict and instability (for example, human displacement, disease, hunger, and famine) may impact food security, neglect of food security efforts can result in limited food access, reduced safety, less defense, and reduced agricultural development, thus impacting overall political stability, human security, and the global economy. In other words, food security is crucial to U.S. national security.

To understand the nuances of food security, definitions and descriptions are presented from both governmental and nongovernmental organizational documentation. One U.S. Government report describes food security as both food aid (in-kind food donations) and food assistance (in-kind donations and cash transfers for purchasing food from local economies) that also includes supporting economic development projects and nutrition programs.⁷ U.S. Code defines food security as access by all people at all times to sufficient food and nutrition for a healthy and productive life.⁸ The UN defines food security as a condition that exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life based

on food availability, access, utilization, and stability.⁹ For our discussion, food security refers to all of the above including plant, animal, and processed food safety and defense from contamination by human intention (for example, agroterrorism) and nonhuman progression (such as invasive species).¹⁰ This analysis, based on research and informal discussions, is categorized into four sections: the history of U.S. policy in conjunction with international initiatives, executive branch strategy and activities, military campaign activities, and recommendations for strengthening food security efforts.

Legislative Actions and International Engagement

U.S. legislative history and international agreements capture methods that address modern food security concerns. U.S. Government international food aid can be traced back to an 1812 earthquake in South America when Washington donated shipments of flour to Venezuela just weeks before declaring war with England.¹¹ Twenty-five years later, a food and agricultural office was lodged within the Department of State that eventually moved to the Department of the Interior.¹² During the Civil War, President Abraham Lincoln established the U.S. Department of Agriculture (USDA) to assist those who produced food and owned land that developed food.¹³

In the 20th century between the world wars, legislation focused on domestic food and agriculture that is now couched in a present-day quadrennial law known as the U.S. Farm Bill. At the end of World War II, food security became a necessity for the international community to maintain postwar regional stability. In support of this goal, the UN Food and Agriculture Organization was born out of a decade-old International Institute of Agriculture to defeat hunger. In 1949, the United States became a signatory to a set of international treaties known as the Geneva Conventions and Protocols, the fourth of which addressed occupying power responsibilities to provide population food aid.¹⁴ A few years later, Congress enacted legislation on surplus food donation and

agricultural trade development that also supports organizations such as the UN World Food Program.

In 1961, Congress passed the Foreign Assistance Act to better assist partner nations with security challenges. This law created the U.S. Agency for International Development (USAID), which carries out U.S. global food policy implementation and coordination.¹⁵ Subsequently, U.S. Government international policy began to shift from donating surplus food to emergency response and long-term agricultural development. Since then, food security-related legislation steadily increased domestic food security and food resilience capability development in foreign nations. Certain initiatives include the Food for Progress Act (the latest Farm Bill),¹⁶ the Feed the Future (FTF) Initiative,¹⁷ the Food for Peace Act,¹⁸ the Global Food Security Act,¹⁹ and relevant public health and agricultural bioterrorism acts.²⁰ To better understand U.S. Government organizations that implement food security efforts, the following section examines components of the executive branch.

The Executive Branch

One document that links executive policy to governmental activities is a national strategy. The President's National Security Strategy articulates policy goals that are connected to objectives that expressly describe or imply food security approaches.²¹ In support, the U.S. Government Global Food Security Strategy links food security departmental objectives to National Security Strategy objectives.²² As a result, food security roles within the executive branch become further defined. The President also articulates policy through executive orders on national security matters via Presidential directives. Over the last 15 years, the following directives set conditions for impacting food security and strategy development. In 2004, President George W. Bush issued the directives *Defense of U.S. Agriculture and Food*, focusing on food security preparedness, and *Biodefense for the 21st Century*, to address food contamination threats.²³

Table. U.S. Agency for International Development and United Nations Sectors

USAID Humanitarian Sectors	UN Cluster Sector System
Agriculture and Food Security	Food Security
Economic Recovery and Market Systems	Early Recovery
Health	Health
Humanitarian Coordination and Information Management	Camp Coordination and Camp Management
Humanitarian Studies, Analysis, or Applications	Education
Logistics and Relief Commodities	Logistics
Nutrition	Nutrition
Protection	Protection
Natural and Technological Risks	Emergency Telecommunication
Shelter and Settlements	Emergency Shelter
Water, Sanitation, and Hygiene	Sanitation, Water, Hygiene

In 2010, President Barack Obama issued the U.S. Global Development Policy, which emphasized food security through FTF.²⁴ The following year, the President issued *National Preparedness*, replacing a previous directive to better synchronize whole-of-government responses to threats that include food security. He also approved *Implementation of the National Strategy for Countering Biological Threats* in support of President Bush's biodefense directives.²⁵ Moreover, *Critical Infrastructure Resilience* revoked a previous directive that replaced another and identified sectors such as food and agriculture.²⁶ The directive *U.S. Security Sector Assistance* was issued to build capabilities of partners and allies in addressing common security issues.²⁷ Focusing on departments with Presidentially appointed Secretaries that implement U.S. Government policy, the following overviews capture individual department global and domestic food security efforts in three cascading categories: significant, additional, and remaining.

Significant Efforts. The State and Agriculture departments play significant roles in achieving global food security objectives. State manages foreign affairs for the President and recently prioritized food security as an issue of national security. Two strategic documents that provide organizational guidance on food assistance, nutrition, and agricultural and rural development are the *Quadrennial*

Diplomacy and Development Review and the *Department of State and USAID Joint Strategic Plan*.²⁸ For purposes of this discussion, USAID, which coordinates and integrates economic development and disaster assistance expertise and resources abroad, is categorized as an entity under State, as they both report to the same Cabinet Secretary.²⁹

State conducts diplomacy that results in foreign aid or assistance (for example, security, humanitarian, development) to other nations. As the lead for U.S. Government security sector assistance, State leads policies, programs, and activities to engage with, help build and sustain the capacity of, and enable foreign partners to contribute to efforts that address their common security challenges, including food security.³⁰ Under security assistance programs, State's Economic Support Fund grants that focus on the poor provide programs for primary agricultural needs.³¹ In conjunction with DOD security teams, State leads joint mission Provincial Reconstruction Teams in Afghanistan to advance local agricultural capacity development.³² The State's Office of Global Food Security also leads diplomatic engagement on U.S. food security and nutrition policy in bilateral and multilateral assistance forums.³³ For domestic response, State manages international contributions of support.

While State leads engagement for U.S. Government food-related initiatives,

USAID coordinates and integrates long-term economic development expertise and resources. Additionally, the USAID administrator serves as the government's de facto Global Food Security Coordinator for the purposes of aligning and coordinating FTF with other U.S. Government food security-related programs and policies. Under the FTF program, USAID leads security and sustenance of food and agriculture development activities as well as administration of certain Food for Peace assistance programs.³⁴ Moreover, USAID implements Global Food Security Act efforts via the Global Food Security Strategy to ensure that government resources are aligned to achieve national objectives.³⁵ For international disasters and crisis situations, State arranges U.S. emergency and early recovery assistance that is managed by USAID across 11 organizational sectors that closely resemble the UN Cluster system (see table).³⁶

The Agriculture and Food Security humanitarian sector that closely mirrors UN Food and Agriculture Organization efforts within the UN Food Security Cluster is administered by the USAID Office of U.S. Foreign Disaster Relief Assistance through coordination and integration of disaster assistance expertise and resources. Other efforts, such as the Famine Early Warning Systems Network, track and forecast potential famines worldwide and aid in prepositioning food in preparation for the deluge of refugees.³⁷

USDA supports U.S. Government food security objectives through governance of issues relating to food, agriculture, natural resources, rural development, and nutrition.³⁸ With offices at over 90 U.S. Embassies, USDA has a long institutional history of cooperating with other countries to achieve their food security goals. In support of the Global Food Security Strategy and other efforts, USDA uses cooperative approaches to animal health, crop diseases, food safety, nutrition, and natural resource management that can reinforce and strengthen national capabilities. Countries in turn can participate in international markets, thus expanding the demand for U.S. agricultural products and enhancing



Sailors aboard aircraft carrier USS *Ronald Reagan* provide humanitarian assistance to Japan as directed in support of Operation *Tomodachi*, March 15, 2011 (U.S. Navy/Michael Feddersen)

global food security.³⁹ Under Food for Peace, USDA implements international nutrition, development, and research collaboration programs through its Foreign Agriculture Service.⁴⁰

With other organizations, USDA assists in food security efforts through agricultural advisor deployments to DOD- or State-led Provincial Reconstruction Teams, research programs, information-sharing, policy and regulation promotions that expand agricultural markets and trade, and leadership to multilateral food security initiatives (for example, the Global Open Data for Agriculture and Nutrition initiative, Global Alliance for Climate Smart Agriculture, Committee on World Food Security, and G20 Meeting of Agricultural Chief Scientists).⁴¹

Both at home and abroad, the USDA Animal and Plant Health Inspection Service protects animal and plant health from invasive pests and diseases. Domestically, USDA develops and executes Federal laws related to farming,

agriculture, forestry, and food guidance.⁴² With its largest focus on food and nutrition service programs, USDA-led activities assist farmers and food producers with the sale of crops and food and help the United States supply high-quality food to the world.⁴³ In support of crisis response, USDA is delegated to be the lead coordinator for Emergency Support Function 11, *Agriculture and Natural Resources*, by the Department of Homeland Security (DHS) in the National Response Framework.⁴⁴

Additional Efforts. Other departments make substantial contributions to U.S. Government global food security efforts. For example, DHS provides domestic security and coordinates Federal crisis response and recovery through its Federal Emergency Management Agency. DHS also supports food security efforts through activities such as cross-border protection at U.S. airports and seaports, agricultural and food sector awareness and warning, vulnerability assessment, mitigation of screening procedures, and

countermeasure employment against the intentional introduction of diseases and biological threats to food supplies.⁴⁵

The Department of Commerce's strategic food objectives focus on fostering healthy and sustainable marine resources such as fish stocks, habitats, and ecosystems.⁴⁶ Its National Oceanic and Atmospheric Administration provides access to comprehensive oceanic, atmospheric, and geophysical data and offers capacity-building assistance through improved weather forecasting, drought early warning systems, and climate change resilience and adaptation.⁴⁷ Furthermore, its International Trade Administration ensures fair trade of agricultural commodities.

DOD supports food security efforts primarily through its military workforce. For international and domestic requests, the sheer size, budget, and ready capabilities of DOD make it an attractive candidate for food security requests in support of government efforts.⁴⁸ In support of U.S. capacity-building



More than 3,000 internally displaced persons sheltered inside UN Mission in Darfur base in Khor Abeche, South Darfur, following attack by armed group on March 22, 2014 (Courtesy UN/Albert Gonzalez Farran)

activities abroad, DOD contributes to engagement and prevention programs and surveillance and response systems, as well as raising awareness and developing missions that incorporate risks posed by current and projected climate variations into planning, resource requirements, and operations considerations.⁴⁹ DOD also provides defense support to civil authorities through research, preparation, surveillance, and response efforts.

The Department of Health and Human Services emphasizes information-sharing, disease surveillance, and laboratory research to diagnose, prevent, and control the spread of disease that impacts food safety.⁵⁰ Via certain components (Centers for Disease Control and Prevention, Food and Drug Administration, and U.S. Public Health Service), Health and Human Services supports responses to investigate, improve surveillance, mitigate consequences, assure

safety and security of national food supplies, and detect foodborne illnesses to protect the U.S. food supply from bioterrorism or agroterrorism.⁵¹

The Treasury Department funds food security programs (for example, the World Bank and Global Agriculture and Food Security Program), relieves or enforces sanctions, and supports economic growth and poverty reduction by overseeing U.S. Government efforts with international financial institutions.⁵²

Remaining Efforts. Other departments maintain capabilities that address domestic food security concerns but have minimal equity in support of global food security efforts. The Department of the Interior develops surveillance and monitoring systems and tracks commodities related to food security, while the Department of Justice enforces Federal consumer protection laws.⁵³ It is also worth noting that the Environmental

Protection Agency enacts laws to protect the food supply from waste and chemicals.

As U.S. Government departments continue to develop their own strategies in support of national food security objectives, the future is uncertain on how they will plan for a robust international workforce response, especially to food systems disruption or complete collapse. Currently, USAID-led foreign disaster relief is effective for routine disasters, but coordinated U.S. food-related assistance is still needed in environments impacted by catastrophic events with cascading effects on critical public infrastructure.⁵⁴ Climate and demographic changes will also place a larger burden and expectations on U.S. Government departments, more specifically DOD, regarding transport and security capabilities. For interoperability and educational reasons, non-DOD organizations should keep a watchful eye on how they are portrayed

by the U.S. military in joint doctrine—the core foundation of military workforce best practices.⁵⁵

Military Campaign Activities

Food security can be debilitated by political, economic, and social elements of conflict such as weak governance, food price volatility, and poor food distribution systems. These elements can lead to long-term disruption of national food systems (growing, harvesting, packing, processing, transforming, marketing, consuming, and disposing of food).⁵⁶ While food security may not be an inherent DOD function for civilian population protection, the joint force conducts food security tasks that are either directed by senior military and political leadership or identified as combatant commander objectives during planning. Food security discussions in joint doctrine can be inferred in several joint documents: under stabilizing activities of Joint Publication (JP) 3-0, *Joint Operations*; security and humanitarian assistance stability functions within JP 3-07, *Stability*; interagency and other organizational dimensions within JP 3-08, *Interorganizational Cooperation*; security sector assistance within JP 3-20, *Security Cooperation*; emergency support responsibilities within JP 3-28, *Defense Support of Civil Authorities*; disaster relief roles within JP 3-29, *Foreign Humanitarian Assistance*; and civil-military interaction within JP 3-57, *Civil-Military Operations*.⁵⁷

The joint force traditionally provides support to U.S. Government food security efforts as an occupying force with legal responsibilities to the population, as part of a peacekeeping operation to protect humanitarian workers for food distribution, or as a provider of assistance to vulnerable populations to ensure food access and availability.⁵⁸ These deployments, activities, and investments can come with more advantages if military personnel and their commanders have basic knowledge of strategic, regional, and local food and agricultural issues. Unfortunately, the lack of food security knowledge can impact operations, long-term U.S. Government efforts,

and, most importantly, the local human and agricultural environment. For example, in the last 15 years, U.S. Central Command (USCENTCOM) and coalition forces that deployed to rural areas in Afghanistan found themselves either directly or indirectly in contact with food and agricultural issues. While roughly 80 percent of Afghans rely on agriculture to provide income and food for their families, decades of conflict have continuously interrupted the traditional interfamilial knowledge transfer of farming. Initially unaware of negative impacts and attitudes generated toward foreign intervention, many stabilization efforts were undermined or lost by a failure to recognize social protocols pertaining to food and agriculture. Some military commanders planned activities that inadvertently disrupted crop production cycles and endangered family food security. Certain tactical practices that were not mindful of herd behavior angered herders who might have otherwise provided valuable intelligence across the vast swaths of insurgent-impacted landscapes the herders occupied. Moreover, interpreters were typically from urban backgrounds and seldom understood food and agricultural issues, which further strained cooperation.⁵⁹ In U.S. Africa Command (USAFRICOM), a former commander described food security challenges as contributing to regional instability but relevant in all areas where the U.S. military has forward presence

*There are undeniable linkages . . . between our responses to food emergencies, food security, and our broader security and stability objectives. . . environmental challenges are likely to increase the severity and frequency of food emergencies . . . unless the international community works together to increase the sustainability of regional and global food supplies.*⁶⁰

While many terms can be used to describe DOD food security contributions, this discussion refers to those DOD-specific contributions as *campaign activities* (for example, military investments, limited deployments, and large-scale missions). Based on mutual

agreements, military investments are in the form of engagement, cooperation, and deterrence activities that promote long-term regional stability through civilian and military capacity-building efforts. These campaign activities are meant to manage internal threats and eventually encourage security-recipient nations to become security providers. Limited deployments such as crisis response and contingencies meet defined requirements rather than promote broad, open-ended, long-term stability, compared to large-scale, standalone missions that are larger, more complex, and longer.⁶¹ As the impact of food insecurity on the broader security environment, along with the connection that conflict has to food access, becomes clearer to understand, the following levels of crisis describe joint force activities: capacity-building, slow onset, rapid onset, and complex.⁶²

Capacity-Building. Combatant commands identify and participate in campaign activities that build partner and host-nation capacity in support of food security. These campaign activities improve the collective ability of the United States and its partner nations in responding effectively and expeditiously to food security challenges. Geographic and functional combatant commands, such as U.S. Pacific Command (USPACOM) and U.S. Special Operations Command (USSOCOM), identify food security-related objectives in campaign plans. For more efficient first-responder, risk-reduction activities, USSOCOM and civil affairs personnel conduct on-the-ground observations that can feed back real-time information on food security threats. In support of their missions are training as well as education through formal courses such as the Agricultural Development for Armed Forces Pre-Deployment Training and Active Army battalion and brigade pilot programs such as Farm Assessment and Evaluation Training. Graduates from these courses return to their units and many deploy to better advise commanders on tactical-level food security issues.⁶³

Additionally, the Chairman of the Joint Chiefs of Staff recently endorsed a special area of emphasis on nontraditional security threats including food security

for military institution consideration.⁶⁴ Other DOD capacity-building efforts include the National Guard Bureau's Agribusiness Development Team concept and State Partnership Program. Both efforts support combatant commander objectives through training and advice to universities, ministries, and farmers as well as through formal state partnerships with foreign countries. In USCENTCOM, National Guard personnel from Texas developed a relationship with a university in Afghanistan to support the country's agriculture future and student preparation for postgraduate work in that field.⁶⁵ In another example, in U.S. European Command, National Guard personnel from Iowa conducted campaign activities with Kosovo ministry counterparts on agricultural exchanges and cooperation with public and private collaboration on agriculture.⁶⁶ At home, U.S. Northern Command (USNORTHCOM) and USPACOM campaign activities support U.S. Government agricultural plant and animal biological defense and safety.⁶⁷ A legitimate threat to domestic food security is embodied by an al Qaeda training manual that is devoted to agroterrorism—that is, the destruction of crops, livestock, and food processing operations.⁶⁸ In conjunction with capacity-building efforts, lethal and nonlethal military operations in support of regional organization, partner, and host-nation requests may be necessary but, importantly, can mitigate instability that impacts the evolution of slow, rapid, and complex food crises.

Slow Onset Crisis. Most slow onset crises emerge based on a confluence of events.⁶⁹ These crises can result in famine or hunger due to either crop failure from drought, climate change, spread of agricultural pests or disease, or gradual deterioration of a situation leading to conflict (for example, chronic poverty, destitution, and government policies that result in widespread malnutrition, an increase in mortality rates, and the destruction of stable livelihoods).⁷⁰ Upon request, DOD acts as a first responder to conduct campaign activities such as limited deployments of crisis response or other contingencies to support U.S. Government-sanctioned

peace operations, foreign humanitarian assistance, and defense support to civil authorities. In USAFRICOM, General Thomas D. Waldhauser, USMC, stated that stabilization efforts that focus against the al Shabaab terrorist group in Somalia could become complicated by famine and drought and that USAFRICOM has to coordinate closely with relief agencies to avoid impacting civilians on the move in search of food.⁷¹ Slow onset crisis missions are usually in response to international calls to action, and if requested, DOD activities would support U.S. Government requirements to support individual nation or international requests.

Rapid Onset Crisis. Rapid onset crises are often localized to one particular area, generally small, and periodic in occurrence. They are usually the result of sudden, natural events such as windstorms, cyclones, hurricanes, typhoons, floods, tsunamis, wildfires, landslides, avalanches, earthquakes, and volcanic eruptions. Upon request, DOD conducts campaign activities such as limited deployments and large-scale missions to support government efforts.⁷² Abroad in 2008, U.S. Southern Command (USSOUTHCOM) rapidly responded to a U.S. Government request to transport and deliver food to Haiti after flooding.⁷³ In 2011, USPACOM personnel transported and delivered tens of thousands of meals in Japan via rotary-wing aircraft after an earthquake and typhoon. A few years later, USCENTCOM personnel airdropped hundreds of bundles of food and thousands of meals to refugees in northern Iraq fleeing persecution by the so-called Islamic State.⁷⁴

For domestic limited deployments and large-scale response missions, DOD (under USNORTHCOM and USPACOM) supports USDA under Emergency Support Function 11 to contain and eradicate outbreaks of plant or animal diseases as well as to provide disaster relief. During Hurricane Sandy, USNORTHCOM assisted in setting up food distribution points around New York City and provided over 144,000 meals to citizens in need, including food delivery to high-rise buildings throughout the city. Besides building capacity and

providing contributions in the form of security and transportation of food during the onset of crisis, DOD contributions are most often intertwined with long-term diplomatic and development efforts.

Complex Crises. Complex crises can result in numerous deaths and considerable suffering from war, disease, hunger, and displacement owing to natural and manmade actions or events.⁷⁵ A tactic to encourage capitulation by adversaries is withholding food from populations or the prevention of food access as a weapon of war (for example, burning crops).⁷⁶ In 2015, the Syrian government used a “starve into submission” policy that led to brokered ceasefires with rebels where they surrendered weapons in return for easing sieges and allowing the entry of food into their controlled areas.⁷⁷ A potential complex crisis related to counterterrorism efforts in the USCENTCOM area of responsibility is the Saudi Arabian blockade of Yemen, a country with high food insecurity that imports 90 percent of its food.⁷⁸ Other considerations are the impacts of globalization, increased food prices, a changing demand for food at the local level, the unintended secondary consequences of economic policies, and increased urbanization challenges (for example, resources and megacities) that lead to population grievances and sometimes radicalization.⁷⁹

In 2007–2010, countries located in both the USCENTCOM and USAFRICOM areas of operation experienced food price increases and subsequent rioting across North Africa and the Middle East as droughts coincided with dramatic changes to food availability and cost.⁸⁰ People across the region no longer found work in the fields and moved to cities, where most did not find work and showed their frustration in the streets in protest.⁸¹ In many cases, protests turned to violence and regimes were toppled, leading the United States into more substantial diplomatic involvement and potential deployment or workforces including the joint force in support of stabilization efforts. In 2010, USSOUTHCOM responded to a government request in support of Haiti



Norman Borlaug Institute for International Agriculture country director and project coordinator shows land being cleared for future farming as part of partnership with U.S. Africa Command to produce large-scale agriculture project on Camp Base, March 17, 2011, Democratic Republic of the Congo (U.S. Africa Command/Amanda McCarty)

earthquake disaster relief by transporting tens of thousands of humanitarian daily rations for distribution.⁸² The issue here was not weak governance but the complete decapitation of governance itself from the people that increased complexities regarding disaster relief, food access, and availability. However, in USCENTCOM, the al Qaeda-affiliated militant group al Shabaab is presently delivering food to locations in Somalia suffering from severe drought. This approach counters previous insurgency practices that severely damaged their group's image with and influence over the local population in 2011, when al Shabaab blocked food aid delivery and killed humanitarian workers.⁸³

Given that U.S. Government support to an international response is expensive, especially in lethal and uncertain

environments, and regardless of the fact that the joint force employs certain capabilities to assist responders, the international community should expect the quantity of U.S. Government response to be limited or even diminished. Therefore, participation in complex crises will most likely need to be planned for beyond a whole-of-government response and require a whole-of-society approach through interorganizational (public, private, and so forth) cooperation to future challenges.⁸⁴

Successfully managing food security can mitigate or prevent conflicts and civilian deaths. When it comes to food security, all levels of command should be aware of the criticality of knowledge transfer and the impact that food security have on the broader security environment. Even though threats persist, the

protection of a country's food system and its restoration when disrupted will be challenges that the U.S. Government should plan and prepare for, including making arrangements to support international workforces as needed.

Although a budget increase is proposed, the amounts are not quite a substitute for the loss of soft power capabilities in other departments, and the extra funds may not even keep the department at an acceptable level of equipment and systems readiness. As such, further analysis of joint force roles in campaign activities such as capacity-builders, first responders, and protectors of critical infrastructure, and the interorganizational cooperation sought with others, should be conducted to create and practice more efficiencies in support of food security efforts.⁸⁵ JFQ

Notes

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Joint Publication 5-0, *Joint Planning*

By Steve Townsend

The Joint Staff Director, Strategic Plans and Policy Directorate (J5), approved a new Joint Publication (JP) 5-0, *Joint Planning*. The publication, signed by the Director, Joint Force Development (J7), will be the fifth iteration of joint doctrine on planning since 1995.

JP 5-0 was developed to support JP 3-0, *Joint Operations*, to identify the planning requirements essential to successfully executing contingency combat

operations. In 2002, an additional manual, JP 5-00.1, *Joint Doctrine for Campaign Planning*, was added to the 5-series to address campaign planning. In 2006, the first update to the original JP 5-0 was conducted, titled *Joint Operation Planning*. This JP included lessons learned from the joint force's response to the terror attacks of September 11 and guidance from Secretary of Defense Donald Rumsfeld. It was updated in 2011 to provide clarity to joint doctrine. These previous versions focused on planning for combat operations and, more specifically, planning for contingency combat operations.

During the recent doctrinal review, commenters noted that joint doctrine adequately addressed operational art, operational design, and the planning process, but fell short on discussing planning for daily operations in a global campaign. These campaigns direct the theater and functional campaigns the combatant commands (CCMDs) execute on a day-to-day basis, forming the basis of Department of Defense (DOD) operations that set conditions to deter conflict or prepare for a contingency response. Additionally, joint doctrine focused on planning at the operational level, leaving a gap in providing the best military advice, and options, to national-level leadership.

The new version of JP 5-0 takes these considerations into account and recognizes that joint planning, especially at the CCMDs, has two key purposes. First, it must provide options for the President and Secretary of Defense in the event of a crisis or contingency. Second, it must provide a means to identify the

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best military advice on the effective and efficient use of the joint force on a daily basis, including short of armed conflict, to protect national interests and achieve the national objectives in a complex, uncertain, and changing environment, from cooperation through competition and, if necessary, armed conflict. While the nature of war has not changed, the character of warfare has evolved. Military operations will increasingly operate in a transregional, multidomain, and multifunctional (TMM) environment. TMM approaches will cut across multiple CCMDs the land, maritime, air, space, and cyberspace domains. Effective planning provides leadership with options that offer the highest probability for success at acceptable risk and enables the efficient use of limited resources, including time, to achieve objectives in this global environment. Global campaigns also identify the best use of the military to compete short of armed conflict to protect U.S. national interests and achieve objectives.

The core elements of the planning process remain unchanged. Whether planning for the long-term campaign that directs daily activities, developing a contingency plan, or planning in a time-constrained environment in response to a crisis, the planning process continues to follow the time-tested steps from initiation and problem identification through mission analysis and course-of-action development to approval and then plan or order development. Similarly, planners still use operational art and elements of operational design in plan development.

Due to the planners' feedback during the joint doctrine review process, and the introduction of global campaign plans and integrated planning, JP 5-0 was significantly rewritten. These changes include:

- CCMD campaign plans were added as the base for all operations the joint force conducts. These campaigns seek to achieve U.S. objectives and protect U.S. interests short of armed conflict. They also set conditions to support a contingency, should one occur.

- Contingency plans serve as branches to the campaign plans. As such, contingency plans should have multiple options at the strategic level to provide opportunities to escalate or de-escalate and return to the campaign. Similarly, the campaign should address the assumptions in a contingency plan in order to reduce uncertainty.
- Since strategic plans must provide options for senior leaders, most notably the President and Secretary of Defense, phasing is not used in those plans. At the strategic level, plans must be flexible and adaptable to allow decisions on escalation and de-escalation rather than planning the expectation that plans, once implemented, continue through fixed, phased progression. The description of phasing remains unchanged, and phasing remains critical at the operational and tactical levels; however, for strategic plans, the six-phase model can be an obstacle in discussing options, requirements, and risks.
- The terms *deliberate* and *crisis action* were removed from planning. All planning uses the same conceptual framework, from problem identification through completion. The differences arise in the use of assumptions, decision points, and output.
- Contingency plans must be integrated across CCMDs. In the TMM environment, operations and their effects are rarely confined to a single combatant commander's geographic or functional area. Plans must address how they interact across commands and domains and the dependencies between commands.
- Appendices were added to address assessments, red teams, posture plans, and theater distribution plans.

Because of the interrelationship between planning and execution, JP 5-0 was developed in close collaboration with JP 3-0, which was published earlier this year. JP 3-0 and 5-0 authors collaborated to ensure continuity between these keystone JPs to address strategic,

operational, and tactical issues. For example, the introduction of theater campaign planning in JP 5-0 resulted in related changes in JP 3-0 to ensure continuity and consistency in language. Plans developed in accordance with JP 5-0 will be executed consistent with the JP 3-0 series of publications. For example, JP 5-0 introduces phasing for the operational and tactical levels, but does not provide any examples; JP 3-0 has examples to show how phasing might be implemented in execution. Conversely, joint operations, conducted on a daily basis outside of contingencies, are now addressed as part of the campaign plan rather than as a phase of a potential contingency. This requires updates to other doctrinal publications to identify how operations support global campaigns outside of contingencies and the relationship between campaign operations and contingency planning.

Planning will continue to evolve as DOD implements integrated planning both in the global campaign plans and integrated contingency planning. As the planning community develops updated processes in the new planning environment, the Joint Doctrine Development Community will capture those best practices and integrate them into JP 5-0 through the adaptive doctrine process.

The updated JP 5-0 is a big step in aligning planning doctrine with the processes used by planners in the combatant commands and the guidance in the National Military Strategy and Joint Strategic Campaign Plan. This version provides joint force commanders and their component commanders with processes that allow for that flexibility and the ability to plan and develop plans for an uncertain and challenging environment. JFQ

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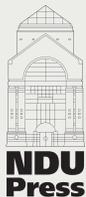
by Heidi A. Urben



Past research contends that with the exception of voting in Presidential elections, military officers' political

participation is fairly muted. Through a survey of more than 500 military elites attending the United States Military Academy and National Defense University, this case study seeks to establish the nature and extent of political expression throughout social media and whether such expression is in keeping with the norm of nonpartisanship.

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JP 3-0, *Joint Operations*

JP 3-01, *Countering Air and Missile Threats*

JP 3-13.4, *Military Deception*

JP 3-18, *Joint Forcible Entry Operations*

JP 3-20, *Security Cooperation*

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JP 4-08, *Logistic Support of Multinational Operations*

JP 5-0, *Joint Planning*

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Edited by R.D. Hooker, Jr.



From NDU Press

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2016 • 396 pp.

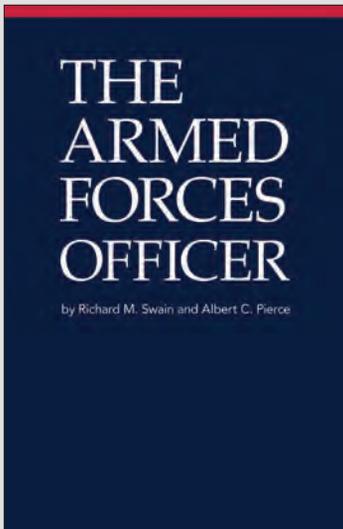
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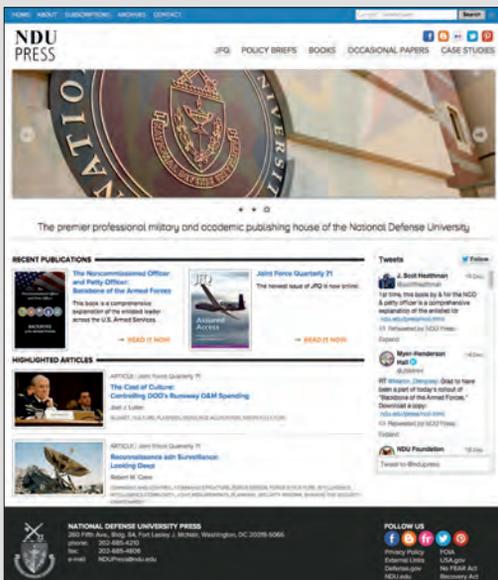
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